

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (C&G Clear Vegetation)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	2.3	13.0	25.7	135.4	1.4	134.0	29.1	1.3	27.9	2,587.0	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	2.3	13.0	25.7	135.4	1.4	134.0	29.1	1.3	27.9	2,587.0	
Total (tons/construction project)	0.0	0.0	0.1	0.3	0.0	0.3	0.1	0.0	0.1	5.7	
Notes:	Project Start Year ->	2016									
	Project Length (months) ->	0									
	Total Project Area (acres) ->	28									
	Maximum Area Disturbed/Day (acres) ->	7									
	Total Soil Imported/Exported (yd ³ /day)->	2000									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.											
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											
Emission Estimates for -> WS DWSC East Levee (C&G Clear Vegetation)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	1.1	5.9	11.7	61.5	0.6	60.9	13.2	0.6	12.7	1,175.9	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.1	5.9	11.7	61.5	0.6	60.9	13.2	0.6	12.7	1,175.9	
Total (megagrams/construction project)	0.0	0.0	0.1	0.3	0.0	0.3	0.1	0.0	0.1	5.2	
Notes:	Project Start Year ->	2016									
	Project Length (months) ->	0									
	Total Project Area (hectares) ->	11									
	Maximum Area Disturbed/Day (hectares) ->	3									
	Total Soil Imported/Exported (meters ³ /day)->	1529									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.											
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (C&G Clear Vegetation)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	2000.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.20	0.02
Grading/Excavation	0.00	0.09
Drainage/Utilities/Sub-Grade	0.00	0.06
Paving	0.00	0.03
Totals	0.20	0.20

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	1.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		6.7	134.0	0.3	27.9	0.1	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Off-Road Equipment Emissions								
	Default							
Grubbing/Land Clearing	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	2.3	13.0	25.7	1.4	1.3	2587.0
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	5.7


	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.1	0.0	0.0	5.7

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	30						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E Import Rip Rap - Barge+)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	1.2	9.3	17.5	67.6	0.6	67.0	14.5	0.5	13.9	2,377.0		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	1.2	9.3	17.5	67.6	0.6	67.0	14.5	0.5	13.9	2,377.0		
Total (tons/construction project)	0.0	0.4	0.7	1.2	0.0	1.2	0.3	0.0	0.2	94.1		
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 0												
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (G&E Import Rip Rap - Barge+)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	0.5	4.2	8.0	30.7	0.3	30.5	6.6	0.2	6.3	1,080.5		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	0.5	4.2	8.0	30.7	0.3	30.5	6.6	0.2	6.3	1,080.5		
Total (megagrams/construction project)	0.0	0.3	0.6	1.1	0.0	1.1	0.2	0.0	0.2	85.4		
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 0												
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model			Version 7.1.2					
Data Entry Worksheet								
Note: Required data input sections have a yellow background.								
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.								
The user is required to enter information in cells C10 through C25.								
Input Type			<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>					
Project Name	WS DWSC East Levee (G&E Import Rip Rap - Barge+)							
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)						
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction						
Project Construction Time	3.6	months						
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock						
Project Length	1.5	miles						
Total Project Area	28.0	acres						
Maximum Area Disturbed/Day	6.7	acres						
Water Trucks Used?	1	1. Yes 2. No						
Soil Imported	0.0	yd ³ /day						
Soil Exported		yd ³ /day						
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)						
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.								
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.								
			Program					
User Override of			Calculated					
Construction Periods			Months					
Grubbing/Land Clearing	0.00	0.36						
Grading/Excavation	3.60	1.62						
Drainage/Utilities/Sub-Grade	0.00	1.08						
Paving	0.00	0.54						
Totals	3.60	3.60						

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of Soil Hauling Defaults		Default Values			
Miles/round trip			30				
Round trips/day			0				
Vehicle miles traveled/day (calculated)				0			
Hauling Emissions		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)		0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)		0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day		0.0	0.0	0.0	0.0	0.0	0.0
Tons per construction period		0.00	0.00	0.00	0.00	0.00	0.00
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker Commute Default Values		Default Values			
Miles/ one-way trip			20				
One-way trips/day			2				
No. of employees: Grubbing/Land Clearing	0.00		10				
No. of employees: Grading/Excavation			15				
No. of employees: Drainage/Utilities/Sub-Grade	0.00		11				
No. of employees: Paving	0.00		13				
		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/mile)		0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grubbing/Land Clearing (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/trip)		0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grubbing/Land Clearing		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grub/Land Clear		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Drainage/Utilities/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Drain/Util/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Paving		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Paving		0.000	0.000	0.000	0.000	0.000	0.000
tons per construction period		0.000	0.000	0.000	0.000	0.000	0.000

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.06	2.91	0.25	0.06	0.03	592.02	
Tons per const. Period - Grading/Excavation	0.00	0.12	0.01	0.00	0.00	23.44	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	1.2	13.9	0.2	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
1.00	0	Cranes	0.97	8.27	13.69	0.48	0.45	1655.80
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
3.00		Plate Compactors	0.15	0.79	0.94	0.04	0.03	129.18
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	1.1	9.1	14.6	0.5	0.5	1785.0
	Grading	tons per phase	0.0	0.4	0.6	0.0	0.0	70.7

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.4	0.6	0.0	0.0	70.7

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes	500.00	226	10.00	8			
Crawler Tractors		208		8			
Crushing/Proc. Equipment		142		8			
Excavators		163		8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8	10.00	8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	530						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (Cutoff Wall SCB Conv'l Method)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	2.8	16.5	31.6	102.2	1.7	100.5	22.4	1.5	20.9	4,207.2		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	2.8	16.5	31.6	102.2	1.7	100.5	22.4	1.5	20.9	4,207.2		
Total (tons/construction project)	0.0	0.1	0.3	0.4	0.0	0.4	0.1	0.0	0.1	34.7		
Notes: Project Start Year -> 2016 Project Length (months) -> 1 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 0												
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (Cutoff Wall SCB Conv'l Method)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	1.3	7.5	14.4	46.4	0.8	45.7	10.2	0.7	9.5	1,912.3		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.3	7.5	14.4	46.4	0.8	45.7	10.2	0.7	9.5	1,912.3		
Total (megagrams/construction project)	0.0	0.1	0.2	0.4	0.0	0.3	0.1	0.0	0.1	31.5		
Notes: Project Start Year -> 2016 Project Length (months) -> 1 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 0												
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (Cutoff Wall SCB Conv'l Method)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.8	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.08
Grading/Excavation	0.75	0.34
Drainage/Utilities/Sub-Grade	0.00	0.23
Paving	0.00	0.11
Totals	0.75	0.75

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	1.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	2.44	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	100.5	0.4	20.9	0.1	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
3.00	3	Excavators	1.54	10.46	16.75	0.82	0.76	2148.24
1.00		Forklifts	0.30	1.13	2.46	0.21	0.19	206.83
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Pumps	0.44	2.47	3.19	0.23	0.22	396.14
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Tractors/Loaders/Backhoes	0.45	1.97	4.09	0.31	0.29	419.90
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	2.7	16.0	26.5	1.6	1.5	3171.1
	Grading	tons per phase	0.0	0.1	0.2	0.0	0.0	26.2

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.1	0.2	0.0	0.0	26.2

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
Equipment	Default Values			Default Values			
	Horsepower			Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208		8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89	10.00	8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172	10.00	8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E Cutoff Wall DSM)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	15.9	93.1	145.7	75.1	8.1	67.0	21.3	7.4	13.9	18,688.1		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	15.9	93.1	145.7	75.1	8.1	67.0	21.3	7.4	13.9	18,688.1		
Total (tons/construction project)	0.7	4.1	6.4	1.7	0.4	1.3	0.6	0.3	0.3	822.3		
Notes:	Project Start Year ->	2016										
	Project Length (months) ->	4										
	Total Project Area (acres) ->	28										
	Maximum Area Disturbed/Day (acres) ->	7										
	Total Soil Imported/Exported (yd ³ /day)->	0										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (G&E Cutoff Wall DSM)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	7.2	42.3	66.2	34.1	3.7	30.5	9.7	3.4	6.3	8,494.6		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	7.2	42.3	66.2	34.1	3.7	30.5	9.7	3.4	6.3	8,494.6		
Total (megagrams/construction project)	0.6	3.7	5.8	1.5	0.3	1.2	0.5	0.3	0.3	745.8		
Notes:	Project Start Year ->	2016										
	Project Length (months) ->	4										
	Total Project Area (hectares) ->	11										
	Maximum Area Disturbed/Day (hectares) ->	3										
	Total Soil Imported/Exported (meters ³ /day)->	0										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (G&E Cutoff Wall DSM)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	4.0	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.40
Grading/Excavation	4.00	1.80
Drainage/Utilities/Sub-Grade	0.00	1.20
Paving	0.00	0.60
Totals	4.00	4.00

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.06	2.91	0.25	0.06	0.03	592.02	
Tons per const. Period - Grading/Excavation	0.00	0.13	0.01	0.00	0.00	26.05	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	1.3	13.9	0.3	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
2.00		Aerial Lifts	0.15	2.16	2.32	0.10	0.09	446.54
2.00		Air Compressors	1.71	8.55	10.96	0.92	0.84	1269.86
2.00		Bore/Drill Rigs	0.92	9.50	13.22	0.39	0.36	2364.04
4.00		Cement and Mortar Mixers	0.34	1.77	2.11	0.09	0.08	289.41
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
2.00	3	Excavators	1.02	6.97	11.17	0.55	0.51	1432.16
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
4.00		Generator Sets	2.57	14.92	19.32	1.37	1.26	2435.33
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
2.00	1	Other Construction Equipment	1.72	8.99	18.27	0.96	0.88	1635.48
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
6.00		Pumps	3.28	18.49	23.94	1.75	1.61	2971.06
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Rough Terrain Forklifts	0.56	5.07	6.83	0.38	0.35	931.86
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	2	Rubber Tired Loaders	1.31	7.79	16.28	0.56	0.51	1656.55
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.72	3.15	6.54	0.50	0.46	671.85
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Welders	1.42	4.93	4.51	0.36	0.33	511.86
	Grading/Excavation	pounds per day	15.7	92.3	135.5	7.9	7.3	16616.0
	Grading	tons per phase	0.7	4.1	6.0	0.3	0.3	731.1

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.7	4.1	6.0	0.3	0.3	731.1

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.				
		Default Values		Default Values
Equipment		Horsepower		Hours/day
Aerial Lifts		63	10.00	8
Air Compressors		106	10.00	8
Bore/Drill Rigs		206	10.00	8
Cement and Mortar Mixers		10	10.00	8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208	10.00	8
Crushing/Proc. Equipment		142		8
Excavators		163	10.00	8
Forklifts		89		8
Generator Sets		66	10.00	8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172	10.00	8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53	10.00	8
Rollers		81		8
Rough Terrain Forklifts		100	10.00	8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200	10.00	8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45	10.00	8
	120			
END OF DATA ENTRY SHEET				

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (C&G Tree Removal)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	2.0	12.1	23.1	101.6	1.1	100.5	21.9	1.0	20.9	2,662.8	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	2.0	12.1	23.1	101.6	1.1	100.5	21.9	1.0	20.9	2,662.8	
Total (tons/construction project)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	2.7	

Notes: Project Start Year -> 2016
 Project Length (months) -> 0
 Total Project Area (acres) -> 28
 Maximum Area Disturbed/Day (acres) -> 7
 Total Soil Imported/Exported (yd³/day)-> 800

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> WS DWSC East Levee (C&G Tree Removal)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	0.9	5.5	10.5	46.2	0.5	45.7	10.0	0.5	9.5	1,210.3	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	0.9	5.5	10.5	46.2	0.5	45.7	10.0	0.5	9.5	1,210.3	
Total (megagrams/construction project)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	2.5	

Notes: Project Start Year -> 2016
 Project Length (months) -> 0
 Total Project Area (hectares) -> 11
 Maximum Area Disturbed/Day (hectares) -> 3
 Total Soil Imported/Exported (meters³/day)-> 612

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model		Version 7.1.2	
Data Entry Worksheet			
Note: Required data input sections have a yellow background.			
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.			
The user is required to enter information in cells C10 through C25.			
Input Type			
Project Name	WS DWSC East Levee (C&G Tree Removal)		
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)	
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction	
Project Construction Time	0.1	months	
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock	
Project Length	1.5	miles	
Total Project Area	28.0	acres	
Maximum Area Disturbed/Day	6.7	acres	
Water Trucks Used?	1	1. Yes 2. No	
Soil Imported		yd ³ /day	
Soil Exported	800.0	yd ³ /day	
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)	
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>			
<p>The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.</p>			
<p>Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.</p>			
		User Override of	Program Calculated
Construction Periods		Construction Months	Months
Grubbing/Land Clearing	0.10		0.01
Grading/Excavation	0.00		0.05
Drainage/Utilities/Sub-Grade	0.00		0.03
Paving	0.00		0.02
Totals	0.10		0.10

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of					
	Soil Hauling Defaults	Default Values					
Miles/round trip	24.00	30					
Round trips/day	35.00	40					
Vehicle miles traveled/day (calculated)				840			
Hauling Emissions							
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day	0.0	0.0	0.0	0.0	0.0	0.0	
Tons per construction period	0.00	0.00	0.00	0.00	0.00	0.00	
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker					
	Commute Default Values	Default Values					
Miles/ one-way trip		20					
One-way trips/day		2					
No. of employees: Grubbing/Land Clearing	5.00	10					
No. of employees: Grading/Excavation	0.00	15					
No. of employees: Drainage/Utilities/Sub-Grade	0.00	11					
No. of employees: Paving	0.00	13					
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650	
Emission rate - Grading/Excavation (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592	
Emission rate - Grading/Excavation (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Grubbing/Land Clearing	0.087	0.100	0.953	0.021	0.009	199.652	
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.001	0.000	0.000	0.220	
Pounds per day - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Drainage/Utilities/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
tons per construction period	0.000	0.000	0.001	0.000	0.000	0.220	

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	1.00	2		80			
Grading/Excavation - Exhaust	0.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.15	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		6.7	100.5	0.1	20.9	0.0	
Fugitive Dust - Grading/Excavation	0.00	0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Off-Road Equipment Emissions								
	Default							
Grubbing/Land Clearing	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Tractors/Loaders/Backhoes	0.45	1.97	4.09	0.31	0.29	419.90
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	1.9	11.0	21.6	1.0	1.0	2167.1
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	2.4

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.0	0.0	0.0	2.4

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	30						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (C&G Strip to Spoils)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	3.9	19.4	40.3	102.7	2.2	100.5	22.9	2.0	20.9	4,121.1	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	3.9	19.4	40.3	102.7	2.2	100.5	22.9	2.0	20.9	4,121.1	
Total (tons/construction project)	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	8.7	
Notes: Project Start Year -> 2016 Project Length (months) -> 0 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 1314 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											
Emission Estimates for -> WS DWSC East Levee (C&G Strip to Spoils)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	1.8	8.8	18.3	46.7	1.0	45.7	10.4	0.9	9.5	1,873.2	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.8	8.8	18.3	46.7	1.0	45.7	10.4	0.9	9.5	1,873.2	
Total (megagrams/construction project)	0.0	0.0	0.1	0.2	0.0	0.2	0.0	0.0	0.0	7.9	
Notes: Project Start Year -> 2016 Project Length (months) -> 0 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 1005 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											

Road Construction Emissions Model		Version 7.1.2					
Data Entry Worksheet							
Note: Required data input sections have a yellow background.							
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.							
The user is required to enter information in cells C10 through C25.							
Input Type							
Project Name	WS DWSC East Levee (C&G Strip to Spoils)						
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)					
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction					
Project Construction Time	0.2	months					
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock					
Project Length	1.5	miles					
Total Project Area	28.0	acres					
Maximum Area Disturbed/Day	6.7	acres					
Water Trucks Used?	1	1. Yes 2. No					
Soil Imported		yd ³ /day					
Soil Exported	1314.0	yd ³ /day					
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)					
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.							
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.							
	User Override of	Program					
	Construction Months	Calculated					
Construction Periods		Months					
Grubbing/Land Clearing	0.20	0.02					
Grading/Excavation	0.00	0.09					
Drainage/Utilities/Sub-Grade	0.00	0.06					
Paving	0.00	0.03					
Totals	0.20	0.20					



To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of					
	Soil Hauling Defaults	Default Values					
Miles/round trip	50.00	30					
Round trips/day	97.00	66					
Vehicle miles traveled/day (calculated)				4850			
Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day	0.0	0.0	0.0	0.0	0.0	0.0	
Tons per construction period	0.00	0.00	0.00	0.00	0.00	0.00	
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker					
	Commute Default Values	Default Values					
Miles/ one-way trip		20					
One-way trips/day		2					
No. of employees: Grubbing/Land Clearing		10					
No. of employees: Grading/Excavation	0.00	15					
No. of employees: Drainage/Utilities/Sub-Grade	0.00	11					
No. of employees: Paving	0.00	13					
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650	
Emission rate - Grading/Excavation (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592	
Emission rate - Grading/Excavation (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Grubbing/Land Clearing	0.174	0.200	1.907	0.042	0.018	399.303	
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.004	0.000	0.000	0.878	
Pounds per day - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Drainage/Utilities/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
tons per construction period	0.000	0.000	0.004	0.000	0.000	0.878	

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	1.00	2		80			
Grading/Excavation - Exhaust	0.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.29	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		6.7	100.5	0.2	20.9	0.0	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Off-Road Equipment Emissions								
	Default							
Grubbing/Land Clearing	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	3.7	17.4	38.6	2.1	1.9	3425.8
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	7.5

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.1	0.0	0.0	7.5

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E to Stockpile)				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	-	-	-	-	-	-	-	-	-	-
Total (tons/construction project)	-	-	-	-	-	-	-	-	-	-

Notes: Project Start Year -> 2016
 Project Length (months) -> 0
 Total Project Area (acres) -> 28
 Maximum Area Disturbed/Day (acres) -> 7
 Total Soil Imported/Exported (yd³/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> WS DWSC East Levee (G&E to Stockpile)				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	-	-	-	-	-	-	-	-	-	-
Total (megagrams/construction project)	-	-	-	-	-	-	-	-	-	-

Notes: Project Start Year -> 2016
 Project Length (months) -> 0
 Total Project Area (hectares) -> 11
 Maximum Area Disturbed/Day (hectares) -> 3
 Total Soil Imported/Exported (meters³/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model		Version 7.1.2					
Data Entry Worksheet							
Note: Required data input sections have a yellow background.							
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.							
The user is required to enter information in cells C10 through C25.							
Input Type							
Project Name	WS DWSC East Levee (G&E to Stockpile)						
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)					
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction				To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.	
Project Construction Time	0.0	months					
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock					
Project Length	1.5	miles					
Total Project Area	28.0	acres					
Maximum Area Disturbed/Day	6.7	acres					
Water Trucks Used?	1	1. Yes 2. No					
Soil Imported		yd ³ /day					
Soil Exported	0.0	yd ³ /day					
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)					
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.							
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.							
	User Override of	Program					
		Calculated					
Construction Periods	Construction Months	Months					
Grubbing/Land Clearing	0.00	0.00					
Grading/Excavation	0.00	0.00					
Drainage/Utilities/Sub-Grade	0.00	0.00					
Paving	0.00	0.00					
Totals	0.00	0.00					

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
4.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.0	0.0	0.0	0.0

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163		8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172	10.00	8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362	10.00	8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98		8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E Surfacing)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	7.8	36.1	111.6	71.8	4.8	67.0	18.1	4.2	13.9	14,463.1		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	7.8	36.1	111.6	71.8	4.8	67.0	18.1	4.2	13.9	14,463.1		
Total (tons/construction project)	0.0	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	31.8		
Notes:	Project Start Year ->	2016										
	Project Length (months) ->	0										
	Total Project Area (acres) ->	28										
	Maximum Area Disturbed/Day (acres) ->	7										
	Total Soil Imported/Exported (yd ³ /day)->	1536										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (G&E Surfacing)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	3.5	16.4	50.7	32.7	2.2	30.5	8.2	1.9	6.3	6,574.1		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	3.5	16.4	50.7	32.7	2.2	30.5	8.2	1.9	6.3	6,574.1		
Total (megagrams/construction project)	0.0	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	28.9		
Notes:	Project Start Year ->	2016										
	Project Length (months) ->	0										
	Total Project Area (hectares) ->	11										
	Maximum Area Disturbed/Day (hectares) ->	3										
	Total Soil Imported/Exported (meters ³ /day)->	1174										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (G&E Surfacing)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	1536.0	yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.02
Grading/Excavation	0.20	0.09
Drainage/Utilities/Sub-Grade	0.00	0.06
Paving	0.00	0.03
Totals	0.20	0.20

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	3.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.08	4.36	0.37	0.09	0.05	888.03	
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	1.95	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	0.1	13.9	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.23	8.37	13.40	0.66	0.61	1718.59
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
2.00	2	Graders	2.67	8.70	25.95	1.46	1.34	1677.56
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Rollers	0.88	3.77	7.73	0.57	0.52	698.83
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	7.1	32.8	72.0	4.0	3.7	6404.2
	Grading	tons per phase	0.0	0.1	0.2	0.0	0.0	14.1

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.1	0.2	0.0	0.0	14.1

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163		8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81	10.00	8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E Import Rip Rap - Truck)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	3.8	20.7	99.9	136.8	2.8	134.0	30.0	2.1	27.9	17,683.7	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	3.8	20.7	99.9	136.8	2.8	134.0	30.0	2.1	27.9	17,683.7	
Total (tons/construction project)	0.2	1.0	4.6	2.9	0.1	2.8	0.7	0.1	0.6	817.0	

Notes: Project Start Year -> 2016
 Project Length (months) -> 4
 Total Project Area (acres) -> 28
 Maximum Area Disturbed/Day (acres) -> 7
 Total Soil Imported/Exported (yd³/day)-> 3200

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> WS DWSC East Levee (G&E Import Rip Rap - Truck)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	1.7	9.4	45.4	62.2	1.3	60.9	13.6	1.0	12.7	8,038.0	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.7	9.4	45.4	62.2	1.3	60.9	13.6	1.0	12.7	8,038.0	
Total (megagrams/construction project)	0.2	0.9	4.2	2.6	0.1	2.5	0.6	0.1	0.5	741.0	

Notes: Project Start Year -> 2016
 Project Length (months) -> 4
 Total Project Area (hectares) -> 11
 Maximum Area Disturbed/Day (hectares) -> 3
 Total Soil Imported/Exported (meters³/day)-> 2446

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (G&E Import Rip Rap - Truck)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	4.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	3200.0	yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	40.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.42
Grading/Excavation	4.20	1.89
Drainage/Utilities/Sub-Grade	0.00	1.26
Paving	0.00	0.63
Totals	4.20	4.20

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	0.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	134.0	2.8	27.9	0.6	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
2.00	3	Excavators	1.02	6.97	11.17	0.55	0.51	1432.16
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Tractors/Loaders/Backhoes	0.45	1.97	4.09	0.31	0.29	419.90
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	2.4	14.5	27.2	1.3	1.2	2883.2
	Grading	tons per phase	0.1	0.7	1.3	0.1	0.1	133.2

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.7	1.3	0.1	0.1	133.2

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	30						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS South Levee (C&G Clear Vegetation)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	2.3	13.0	25.7	135.4	1.4	134.0	29.1	1.3	27.9	2,587.0	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	2.3	13.0	25.7	135.4	1.4	134.0	29.1	1.3	27.9	2,587.0	
Total (tons/construction project)	0.0	0.0	0.1	0.3	0.0	0.3	0.1	0.0	0.1	5.7	
Notes:	Project Start Year ->	2016									
	Project Length (months) ->	1									
	Total Project Area (acres) ->	28									
	Maximum Area Disturbed/Day (acres) ->	7									
	Total Soil Imported/Exported (yd ³ /day)->	2000									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.											
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											
Emission Estimates for -> WS South Levee (C&G Clear Vegetation)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	1.1	5.9	11.7	61.5	0.6	60.9	13.2	0.6	12.7	1,175.9	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.1	5.9	11.7	61.5	0.6	60.9	13.2	0.6	12.7	1,175.9	
Total (megagrams/construction project)	0.0	0.0	0.1	0.3	0.0	0.3	0.1	0.0	0.1	5.2	
Notes:	Project Start Year ->	2016									
	Project Length (months) ->	1									
	Total Project Area (hectares) ->	11									
	Maximum Area Disturbed/Day (hectares) ->	3									
	Total Soil Imported/Exported (meters ³ /day)->	1529									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.											
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS South Levee (C&G Clear Vegetation)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.5	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	2000.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.20	0.05
Grading/Excavation	0.00	0.23
Drainage/Utilities/Sub-Grade	0.00	0.15
Paving	0.00	0.08
Totals	0.20	0.50
Please note: You have entered a different number of months than the project length shown in cell C13.		

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	1.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		6.7	134.0	0.3	27.9	0.1	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Off-Road Equipment Emissions								
	Default							
Grubbing/Land Clearing	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	2.3	13.0	25.7	1.4	1.3	2587.0
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	5.7

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	<i>Program-estimate</i>	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.1	0.0	0.0	5.7

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	30						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E Import Rip Rap - Barge+)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	1.2	9.3	17.5	67.6	0.6	67.0	14.5	0.5	13.9	2,377.0		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	1.2	9.3	17.5	67.6	0.6	67.0	14.5	0.5	13.9	2,377.0		
Total (tons/construction project)	0.0	0.4	0.7	1.2	0.0	1.2	0.3	0.0	0.2	94.1		
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 0 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS Sac South Levee (G&E Import Rip Rap - Barge+)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	0.5	4.2	8.0	30.7	0.3	30.5	6.6	0.2	6.3	1,080.5		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	0.5	4.2	8.0	30.7	0.3	30.5	6.6	0.2	6.3	1,080.5		
Total (megagrams/construction project)	0.0	0.3	0.6	1.1	0.0	1.1	0.2	0.0	0.2	85.4		
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 0 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2					
Data Entry Worksheet							
Note: Required data input sections have a yellow background.							
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.							
The user is required to enter information in cells C10 through C25.							
Input Type							
Project Name	WS Sac South Levee (G&E Import Rip Rap - Barge+)						
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)					
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction					
Project Construction Time	3.6	months					
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock					
Project Length	1.5	miles					
Total Project Area	28.0	acres					
Maximum Area Disturbed/Day	6.7	acres					
Water Trucks Used?	1	1. Yes 2. No					
Soil Imported	0.0	yd ³ /day					
Soil Exported		yd ³ /day					
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)					
To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.							
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.							
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.							
	User Override of	Program Calculated					
Construction Periods	Construction Months	Months					
Grubbing/Land Clearing	0.00	0.36					
Grading/Excavation	3.60	1.62					
Drainage/Utilities/Sub-Grade	0.00	1.08					
Paving	0.00	0.54					
Totals	3.60	3.60					

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of Soil Hauling Defaults		Default Values			
Miles/round trip			30				
Round trips/day			0				
Vehicle miles traveled/day (calculated)				0			
Hauling Emissions		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)		0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)		0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day		0.0	0.0	0.0	0.0	0.0	0.0
Tons per construction period		0.00	0.00	0.00	0.00	0.00	0.00
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker Commute Default Values		Default Values			
Miles/ one-way trip			20				
One-way trips/day			2				
No. of employees: Grubbing/Land Clearing	0.00		10				
No. of employees: Grading/Excavation			15				
No. of employees: Drainage/Utilities/Sub-Grade	0.00		11				
No. of employees: Paving	0.00		13				
		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/mile)		0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grubbing/Land Clearing (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/trip)		0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grubbing/Land Clearing		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grub/Land Clear		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Drainage/Utilities/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Drain/Util/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Paving		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Paving		0.000	0.000	0.000	0.000	0.000	0.000
tons per construction period		0.000	0.000	0.000	0.000	0.000	0.000

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.06	2.91	0.25	0.06	0.03	592.02	
Tons per const. Period - Grading/Excavation	0.00	0.12	0.01	0.00	0.00	23.44	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	1.2	13.9	0.2	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	


	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
1.00	0	Cranes	0.97	8.27	13.69	0.48	0.45	1655.80
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
3.00		Plate Compactors	0.15	0.79	0.94	0.04	0.03	129.18
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	1.1	9.1	14.6	0.5	0.5	1785.0
	Grading	tons per phase	0.0	0.4	0.6	0.0	0.0	70.7

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.4	0.6	0.0	0.0	70.7

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes	500.00	226	10.00	8			
Crawler Tractors		208		8			
Crushing/Proc. Equipment		142		8			
Excavators		163		8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8	10.00	8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	530						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (Cutoff Wall SCB Conv'l Method)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	2.9	17.1	32.4	102.2	1.7	100.5	22.5	1.6	20.9	4,306.2		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	2.9	17.1	32.4	102.2	1.7	100.5	22.5	1.6	20.9	4,306.2		
Total (tons/construction project)	0.1	0.4	0.8	1.1	0.0	1.1	0.3	0.0	0.2	104.2		
Notes: Project Start Year -> 2016 Project Length (months) -> 2 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 0 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS Sac South Levee (Cutoff Wall SCB Conv'l Method)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	1.3	7.8	14.7	46.5	0.8	45.7	10.2	0.7	9.5	1,957.4		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.3	7.8	14.7	46.5	0.8	45.7	10.2	0.7	9.5	1,957.4		
Total (megagrams/construction project)	0.1	0.4	0.7	1.0	0.0	1.0	0.2	0.0	0.2	94.5		
Notes: Project Start Year -> 2016 Project Length (months) -> 2 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 0 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2							
Data Entry Worksheet									
Note: Required data input sections have a yellow background.									
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.									
The user is required to enter information in cells C10 through C25.									
Input Type									
Project Name	WS Sac South Levee (Cutoff Wall SCB Conv'l Method)								
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)							
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction		To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.					
Project Construction Time	2.2	months							
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock							
Project Length	1.5	miles							
Total Project Area	28.0	acres							
Maximum Area Disturbed/Day	6.7	acres							
Water Trucks Used?	1	1. Yes 2. No							
Soil Imported		yd ³ /day							
Soil Exported		yd ³ /day							
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)							
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.									
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.									
			Program						
		User Override of	Calculated						
Construction Periods		Construction Months	Months						
Grubbing/Land Clearing		0.00	0.22						
Grading/Excavation		2.20	0.99						
Drainage/Utilities/Sub-Grade		0.00	0.66						
Paving		0.00	0.33						
Totals		2.20	2.20						

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	1.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grading/Excavation	0.00	0.04	0.00	0.00	0.00	7.16	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	100.5	1.1	20.9	0.2	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
3.00	3	Excavators	1.54	10.46	16.75	0.82	0.76	2148.24
1.00		Forklifts	0.30	1.13	2.46	0.21	0.19	206.83
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Pumps	0.55	3.08	3.99	0.29	0.27	495.18
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Tractors/Loaders/Backhoes	0.45	1.97	4.09	0.31	0.29	419.90
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	2.8	16.6	27.3	1.6	1.5	3270.2
	Grading	tons per phase	0.1	0.4	0.7	0.0	0.0	79.1

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.4	0.7	0.0	0.0	79.1

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.				
		Default Values		Default Values
Equipment		Horsepower		Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163	10.00	8
Forklifts		89	10.00	8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53	10.00	8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98	10.00	8
Trenchers		81		8
Welders		45		8
	40			
END OF DATA ENTRY SHEET				

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E Cutoff Wall DSM)				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	-	-	-	-	-	-	-	-	-	-
Total (tons/construction project)	-	-	-	-	-	-	-	-	-	-
Notes:	Project Start Year ->	2016								
	Project Length (months) ->	0								
	Total Project Area (acres) ->	28								
	Maximum Area Disturbed/Day (acres) ->	7								
	Total Soil Imported/Exported (yd ³ /day)->	0								
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										
Emission Estimates for -> WS Sac South Levee (G&E Cutoff Wall DSM)				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	-	-	-	-	-	-	-	-	-	-
Total (megagrams/construction project)	-	-	-	-	-	-	-	-	-	-
Notes:	Project Start Year ->	2016								
	Project Length (months) ->	0								
	Total Project Area (hectares) ->	11								
	Maximum Area Disturbed/Day (hectares) ->	3								
	Total Soil Imported/Exported (meters ³ /day)->	0								
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (G&E Cutoff Wall DSM)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.0	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.00
Grading/Excavation	0.00	0.00
Drainage/Utilities/Sub-Grade	0.00	0.00
Paving	0.00	0.00
Totals	0.00	0.00

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.				
		Default Values		Default Values
Equipment		Horsepower		Hours/day
Aerial Lifts		63	10.00	8
Air Compressors		106	10.00	8
Bore/Drill Rigs		206	10.00	8
Cement and Mortar Mixers		10	10.00	8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208	10.00	8
Crushing/Proc. Equipment		142		8
Excavators		163	10.00	8
Forklifts		89		8
Generator Sets		66	10.00	8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172	10.00	8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53	10.00	8
Rollers		81		8
Rough Terrain Forklifts		100	10.00	8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200	10.00	8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45	10.00	8
	120			
END OF DATA ENTRY SHEET				

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (C&G Tree Removal)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	2.0	12.1	23.1	101.6	1.1	100.5	21.9	1.0	20.9	2,662.8	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	2.0	12.1	23.1	101.6	1.1	100.5	21.9	1.0	20.9	2,662.8	
Total (tons/construction project)	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	5.5	

Notes: Project Start Year -> 2016
 Project Length (months) -> 0
 Total Project Area (acres) -> 28
 Maximum Area Disturbed/Day (acres) -> 7
 Total Soil Imported/Exported (yd³/day)-> 800

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> WS Sac South Levee (C&G Tree Removal)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	0.9	5.5	10.5	46.2	0.5	45.7	10.0	0.5	9.5	1,210.3	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	0.9	5.5	10.5	46.2	0.5	45.7	10.0	0.5	9.5	1,210.3	
Total (megagrams/construction project)	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	5.0	

Notes: Project Start Year -> 2016
 Project Length (months) -> 0
 Total Project Area (hectares) -> 11
 Maximum Area Disturbed/Day (hectares) -> 3
 Total Soil Imported/Exported (meters³/day)-> 612

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (C&G Tree Removal)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	800.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.20	0.02
Grading/Excavation	0.00	0.09
Drainage/Utilities/Sub-Grade	0.00	0.06
Paving	0.00	0.03
Totals	0.20	0.20

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of					
	Soil Hauling Defaults	Default Values					
Miles/round trip	24.00	30					
Round trips/day	35.00	40					
Vehicle miles traveled/day (calculated)				840			
Hauling Emissions							
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day	0.0	0.0	0.0	0.0	0.0	0.0	
Tons per construction period	0.00	0.00	0.00	0.00	0.00	0.00	
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker					
	Commute Default Values	Default Values					
Miles/ one-way trip		20					
One-way trips/day		2					
No. of employees: Grubbing/Land Clearing	5.00	10					
No. of employees: Grading/Excavation	0.00	15					
No. of employees: Drainage/Utilities/Sub-Grade	0.00	11					
No. of employees: Paving	0.00	13					
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650	
Emission rate - Grading/Excavation (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592	
Emission rate - Grading/Excavation (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Grubbing/Land Clearing	0.087	0.100	0.953	0.021	0.009	199.652	
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.002	0.000	0.000	0.439	
Pounds per day - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Drainage/Utilities/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
tons per construction period	0.000	0.000	0.002	0.000	0.000	0.439	

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	1.00	2		80			
Grading/Excavation - Exhaust	0.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.29	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		6.7	100.5	0.2	20.9	0.0	
Fugitive Dust - Grading/Excavation	0.00	0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Off-Road Equipment Emissions								
	Default							
Grubbing/Land Clearing	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Tractors/Loaders/Backhoes	0.45	1.97	4.09	0.31	0.29	419.90
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	1.9	11.0	21.6	1.0	1.0	2167.1
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	4.8

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
0.00		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.0	0.0	0.0	4.8

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175		8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	30						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (C&G Strip to Spoils)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	3.9	19.4	40.3	102.7	2.2	100.5	22.9	2.0	20.9	4,121.1	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	3.9	19.4	40.3	102.7	2.2	100.5	22.9	2.0	20.9	4,121.1	
Total (tons/construction project)	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	10.2	
Notes:	Project Start Year ->	2016									
	Project Length (months) ->	1									
	Total Project Area (acres) ->	28									
	Maximum Area Disturbed/Day (acres) ->	7									
	Total Soil Imported/Exported (yd ³ /day)->	1389									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.											
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											
Emission Estimates for -> WS Sac South Levee (C&G Strip to Spoils)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	1.8	8.8	18.3	46.7	1.0	45.7	10.4	0.9	9.5	1,873.2	
Grading/Excavation	-	-	-	-	-	-	-	-	-	-	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.8	8.8	18.3	46.7	1.0	45.7	10.4	0.9	9.5	1,873.2	
Total (megagrams/construction project)	0.0	0.0	0.1	0.2	0.0	0.2	0.0	0.0	0.0	9.2	
Notes:	Project Start Year ->	2016									
	Project Length (months) ->	1									
	Total Project Area (hectares) ->	11									
	Maximum Area Disturbed/Day (hectares) ->	3									
	Total Soil Imported/Exported (meters ³ /day)->	1062									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.											
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (C&G Strip to Spoils)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	1.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	1389.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.20	0.12
Grading/Excavation	0.00	0.54
Drainage/Utilities/Sub-Grade	0.00	0.36
Paving	0.00	0.18
Totals	0.20	1.20
Please note: You have entered a different number of months than the project length shown in cell C13.		

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of					
	Soil Hauling Defaults	Default Values					
Miles/round trip	50.00	30					
Round trips/day	97.00	69					
Vehicle miles traveled/day (calculated)				4850			
Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day	0.0	0.0	0.0	0.0	0.0	0.0	
Tons per construction period	0.00	0.00	0.00	0.00	0.00	0.00	
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker					
	Commute Default Values	Default Values					
Miles/ one-way trip		20					
One-way trips/day		2					
No. of employees: Grubbing/Land Clearing		10					
No. of employees: Grading/Excavation	0.00	15					
No. of employees: Drainage/Utilities/Sub-Grade	0.00	11					
No. of employees: Paving	0.00	13					
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650	
Emission rate - Grading/Excavation (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Grubbing/Land Clearing (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592	
Emission rate - Grading/Excavation (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Emission rate - Paving (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Grubbing/Land Clearing	0.174	0.200	1.907	0.042	0.018	399.303	
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.004	0.000	0.000	0.878	
Pounds per day - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Grading/Excavation	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Drainage/Utilities/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Drain/Util/Sub-Grade	0.000	0.000	0.000	0.000	0.000	0.000	
Pounds per day - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
Tons per const. Period - Paving	0.000	0.000	0.000	0.000	0.000	0.000	
tons per construction period	0.000	0.000	0.004	0.000	0.000	0.878	

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	1.00	2		80			
Grading/Excavation - Exhaust	0.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grub/Land Clear	0.00	0.01	0.00	0.00	0.00	1.76	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		6.7	100.5	0.2	20.9	0.0	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

Off-Road Equipment Emissions								
	Default							
Grubbing/Land Clearing	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	3.7	17.4	38.6	2.1	1.9	3425.8
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	7.5

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.1	0.0	0.0	7.5

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E to Stockpile)				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	-	-	-	-	-	-	-	-	-	-
Total (tons/construction project)	-	-	-	-	-	-	-	-	-	-
Notes:	Project Start Year ->	2016								
	Project Length (months) ->	0								
	Total Project Area (acres) ->	28								
	Maximum Area Disturbed/Day (acres) ->	7								
	Total Soil Imported/Exported (yd ³ /day)->	0								
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										
Emission Estimates for -> WS Sac South Levee (G&E to Stockpile)				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	-	-	-	-	-	-	-	-	-	-
Total (megagrams/construction project)	-	-	-	-	-	-	-	-	-	-
Notes:	Project Start Year ->	2016								
	Project Length (months) ->	0								
	Total Project Area (hectares) ->	11								
	Maximum Area Disturbed/Day (hectares) ->	3								
	Total Soil Imported/Exported (meters ³ /day)->	0								
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (G&E to Stockpile)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.0	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	0.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.00
Grading/Excavation	0.00	0.00
Drainage/Utilities/Sub-Grade	0.00	0.00
Paving	0.00	0.00
Totals	0.00	0.00

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	<i>Program-estimate</i>	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
4.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grading	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.0	0.0	0.0	0.0	0.0

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.				
		Default Values		Default Values
Equipment		Horsepower		Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208	10.00	8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175	10.00	8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172	10.00	8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362	10.00	8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8
	40			
END OF DATA ENTRY SHEET				

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E to Spoils)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	5.3	25.2	107.2	70.6	3.6	67.0	16.9	2.9	13.9	16,827.5		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	5.3	25.2	107.2	70.6	3.6	67.0	16.9	2.9	13.9	16,827.5		
Total (tons/construction project)	0.2	0.9	3.8	1.2	0.1	1.1	0.3	0.1	0.2	592.3		
Notes: Project Start Year -> 2016 Project Length (months) -> 3 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 2229 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS Sac South Levee (G&E to Spoils)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	2.4	11.4	48.7	32.1	1.7	30.5	7.7	1.3	6.3	7,648.9		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	2.4	11.4	48.7	32.1	1.7	30.5	7.7	1.3	6.3	7,648.9		
Total (megagrams/construction project)	0.2	0.8	3.4	1.1	0.1	1.0	0.3	0.1	0.2	537.3		
Notes: Project Start Year -> 2016 Project Length (months) -> 3 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 1704 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (G&E to Spoils)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	3.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	2229.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
<p>The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.</p>		
<p>Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.</p>		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.32
Grading/Excavation	3.20	1.44
Drainage/Utilities/Sub-Grade	0.00	0.96
Paving	0.00	0.48
Totals	3.20	3.20

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of Soil Hauling Defaults		Default Values			
Miles/round trip			30				
Round trips/day			111				
Vehicle miles traveled/day (calculated)				3343.5			
Hauling Emissions		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)		0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)		0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day		1.2	60.8	5.2	1.2	0.7	12371.4
Tons per construction period		0.04	2.14	0.18	0.04	0.03	435.47
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker Commute Default Values		Default Values			
Miles/ one-way trip			20				
One-way trips/day			2				
No. of employees: Grubbing/Land Clearing		0.00	10				
No. of employees: Grading/Excavation		10.00	15				
No. of employees: Drainage/Utilities/Sub-Grade		0.00	11				
No. of employees: Paving		0.00	13				
		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/mile)		0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grubbing/Land Clearing (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/trip)		0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grubbing/Land Clearing		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grub/Land Clear		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Drainage/Utilities/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Drain/Util/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Paving		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Paving		0.000	0.000	0.000	0.000	0.000	0.000
tons per construction period		0.000	0.000	0.000	0.000	0.000	0.000

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.06	2.91	0.25	0.06	0.03	592.02	
Tons per const. Period - Grading/Excavation	0.00	0.10	0.01	0.00	0.00	20.84	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	1.1	13.9	0.2	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	4.1	19.8	43.5	2.3	2.2	3864.1
	Grading	tons per phase	0.1	0.7	1.5	0.1	0.1	136.0

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E to Spoils)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	5.9	27.6	135.5	71.2	4.2	67.0	17.2	3.3	13.9	22,586.7		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	5.9	27.6	135.5	71.2	4.2	67.0	17.2	3.3	13.9	22,586.7		
Total (tons/construction project)	0.2	1.0	4.9	1.2	0.2	1.1	0.3	0.1	0.2	819.9		
Notes: Project Start Year -> 2016 Project Length (months) -> 3 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 1389 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (G&E to Spoils)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	2.7	12.5	61.6	32.4	1.9	30.5	7.8	1.5	6.3	10,266.7		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	2.7	12.5	61.6	32.4	1.9	30.5	7.8	1.5	6.3	10,266.7		
Total (megagrams/construction project)	0.2	0.9	4.5	1.1	0.1	1.0	0.3	0.1	0.2	743.7		
Notes: Project Start Year -> 2016 Project Length (months) -> 3 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 1062 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (G&E to Spoils)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	3.3	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd ³ /day
Soil Exported	1389.0	yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.33
Grading/Excavation	3.30	1.49
Drainage/Utilities/Sub-Grade	0.00	0.99
Paving	0.00	0.50
Totals	3.30	3.30

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.06	2.91	0.25	0.06	0.03	592.02	
Tons per const. Period - Grading/Excavation	0.00	0.11	0.01	0.00	0.00	21.49	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	1.1	13.9	0.2	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	4.1	19.8	43.5	2.3	2.2	3864.1
	Grading	tons per phase	0.1	0.7	1.6	0.1	0.1	140.3

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.7	1.6	0.1	0.1	140.3

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values					
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81		8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E Import Impervious Fill)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	9.2	55.1	135.8	105.5	5.0	100.5	25.2	4.3	20.9	17,970.3	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	9.2	55.1	135.8	105.5	5.0	100.5	25.2	4.3	20.9	17,970.3	
Total (tons/construction project)	0.1	0.5	1.2	0.4	0.0	0.4	0.1	0.0	0.1	158.1	

Notes: Project Start Year -> 2016
 Project Length (months) -> 1
 Total Project Area (acres) -> 28
 Maximum Area Disturbed/Day (acres) -> 7
 Total Soil Imported/Exported (yd³/day)-> 1241

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.


Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> WS Sac South Levee (G&E Import Impervious Fill)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	4.2	25.0	61.7	47.9	2.3	45.7	11.5	2.0	9.5	8,168.3	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	4.2	25.0	61.7	47.9	2.3	45.7	11.5	2.0	9.5	8,168.3	
Total (megagrams/construction project)	0.1	0.4	1.1	0.4	0.0	0.4	0.1	0.0	0.1	143.4	

Notes: Project Start Year -> 2016
 Project Length (months) -> 1
 Total Project Area (hectares) -> 11
 Maximum Area Disturbed/Day (hectares) -> 3
 Total Soil Imported/Exported (meters³/day)-> 949

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model		Version 7.1.2	
Data Entry Worksheet			
Note: Required data input sections have a yellow background.			
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.			
The user is required to enter information in cells C10 through C25.			
			
Input Type			
Project Name	WS Sac South Levee (G&E Import Impervious Fill)		
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)	
Project Type	1	1 New Road Construction	
		2 Road Widening	
		3 Bridge/Overpass Construction	
Project Construction Time	0.8	months	
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel	
		2. Weathered Rock-Earth	
		3. Blasted Rock	
Project Length	1.5	miles	
Total Project Area	28.0	acres	
Maximum Area Disturbed/Day	6.7	acres	
Water Trucks Used?	1	1. Yes 2. No	
Soil Imported	1241.0	yd ³ /day	
Soil Exported		yd ³ /day	
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)	
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.			
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.			
		User Override of	Program
		Construction Months	Calculated
Construction Periods		Construction Months	Months
Grubbing/Land Clearing	0.00	0.08	
Grading/Excavation	0.80	0.36	
Drainage/Utilities/Sub-Grade	0.00	0.24	
Paving	0.00	0.12	
Totals	0.80	0.80	

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Hauling emission default values can be overridden in cells C45 through C46.							
Soil Hauling Emissions							
User Input		User Override of Soil Hauling Defaults		Default Values			
Miles/round trip			30				
Round trips/day			62				
Vehicle miles traveled/day (calculated)				1861.5			
Hauling Emissions		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)		0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)		0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day		0.6	33.8	2.9	0.7	0.4	6887.8
Tons per construction period		0.01	0.30	0.03	0.01	0.00	60.61
Worker commute default values can be overridden in cells C60 through C65.							
Worker Commute Emissions							
		User Override of Worker Commute Default Values		Default Values			
Miles/ one-way trip			20				
One-way trips/day			2				
No. of employees: Grubbing/Land Clearing		0.00	10				
No. of employees: Grading/Excavation		10.00	15				
No. of employees: Drainage/Utilities/Sub-Grade		0.00	11				
No. of employees: Paving		0.00	13				
		ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/mile)		0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/mile)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grubbing/Land Clearing (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/trip)		0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Paving (grams/trip)		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grubbing/Land Clearing		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grub/Land Clear		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grading/Excavation		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Drainage/Utilities/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Drain/Util/Sub-Grade		0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Paving		0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Paving		0.000	0.000	0.000	0.000	0.000	0.000
tons per construction period		0.000	0.000	0.000	0.000	0.000	0.000

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	1.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	2.60	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	100.5	0.4	20.9	0.1	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Rollers	0.44	1.89	3.86	0.28	0.26	349.42
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Scrapers	1.82	9.07	22.12	0.89	0.82	2010.03
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
3.00		Tractors/Loaders/Backhoes	3.07	25.30	39.19	1.36	1.25	5402.74
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	8.6	52.1	100.5	4.3	3.9	10786.5
	Grading	tons per phase	0.1	0.5	0.9	0.0	0.0	94.9

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.5	0.9	0.0	0.0	94.9

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81	10.00	8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362	10.00	8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes	425.00	98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	485						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E Import Impervious Fill)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	10.0	58.7	178.0	72.8	5.8	67.0	18.8	4.8	13.9	26,549.0		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	10.0	58.7	178.0	72.8	5.8	67.0	18.8	4.8	13.9	26,549.0		
Total (tons/construction project)	0.1	0.4	1.2	0.2	0.0	0.2	0.1	0.0	0.0	175.2		
Notes: Project Start Year -> 2016 Project Length (months) -> 1 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 1253 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (G&E Import Impervious Fill)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	4.6	26.7	80.9	33.1	2.6	30.5	8.5	2.2	6.3	12,067.7		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	4.6	26.7	80.9	33.1	2.6	30.5	8.5	2.2	6.3	12,067.7		
Total (megagrams/construction project)	0.1	0.4	1.1	0.2	0.0	0.2	0.1	0.0	0.0	158.9		
Notes: Project Start Year -> 2016 Project Length (months) -> 1 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 958 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2					
Data Entry Worksheet							
Note: Required data input sections have a yellow background.							
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.							
The user is required to enter information in cells C10 through C25.							
Input Type							
Project Name	WS DWSC East Levee (G&E Import Impervious Fill)						
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)					
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction					
Project Construction Time	0.6	months					
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock					
Project Length	1.5	miles					
Total Project Area	28.0	acres					
Maximum Area Disturbed/Day	6.7	acres					
Water Trucks Used?	1	1. Yes 2. No					
Soil Imported	1253.0	yd ³ /day					
Soil Exported		yd ³ /day					
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)					
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>							
<p>The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.</p>							
<p>Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.</p>							
		Program					
User Override of		Calculated					
Construction Periods		Months					
Grubbing/Land Clearing	0.00	0.06					
Grading/Excavation	0.60	0.27					
Drainage/Utilities/Sub-Grade	0.00	0.18					
Paving	0.00	0.09					
Totals	0.60	0.60					

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust		2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.06	2.91	0.25	0.06	0.03	592.02	
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	3.91	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	0.2	13.9	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	


	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.51	3.49	5.58	0.27	0.25	716.08
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Rollers	0.44	1.89	3.86	0.28	0.26	349.42
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Scrapers	1.82	9.07	22.12	0.89	0.82	2010.03
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
3.00		Tractors/Loaders/Backhoes	3.07	25.30	39.19	1.36	1.25	5402.74
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	8.6	52.1	100.5	4.3	3.9	10786.5
	Grading	tons per phase	0.1	0.3	0.7	0.0	0.0	71.2

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.3	0.7	0.0	0.0	71.2

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81	10.00	8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362	10.00	8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes	425.00	98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	485						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E Import Random Fill/ Topsoil)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	18.9	113.0	293.3	77.4	10.4	67.0	22.9	8.9	13.9	40,499.3		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	18.9	113.0	293.3	77.4	10.4	67.0	22.9	8.9	13.9	40,499.3		
Total (tons/construction project)	0.8	4.7	12.1	1.7	0.4	1.2	0.6	0.4	0.3	1,670.6		
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 2555 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS Sac South Levee (G&E Import Random Fill/ Topsoil)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	8.6	51.4	133.3	35.2	4.7	30.5	10.4	4.1	6.3	18,408.8		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	8.6	51.4	133.3	35.2	4.7	30.5	10.4	4.1	6.3	18,408.8		
Total (megagrams/construction project)	0.7	4.2	11.0	1.5	0.4	1.1	0.6	0.3	0.2	1,515.3		
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 1953 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2	
Data Entry Worksheet			
Note: Required data input sections have a yellow background.			
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.			
The user is required to enter information in cells C10 through C25.			
Input Type			
Project Name	WS Sac South Levee (G&E Import Random Fill/ Topsoil)		
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)	
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction	
Project Construction Time	3.8	months	
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock	
Project Length	1.5	miles	
Total Project Area	28.0	acres	
Maximum Area Disturbed/Day	6.7	acres	
Water Trucks Used?	1	1. Yes 2. No	
Soil Imported	2555.0	yd ³ /day	
Soil Exported		yd ³ /day	
Average Truck Capacity	30.0	yd ³ (assume 20 if unknown)	
<p>The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.</p> <p>Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.</p>			
		Program	
User Override of		Calculated	
Construction Periods		Months	
Grubbing/Land Clearing	0.00	0.38	
Grading/Excavation	3.75	1.69	
Drainage/Utilities/Sub-Grade	0.00	1.13	
Paving	0.00	0.56	
Totals	3.75	3.75	

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	3.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.08	4.36	0.37	0.09	0.05	888.03	
Tons per const. Period - Grading/Excavation	0.00	0.18	0.02	0.00	0.00	36.63	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	1.2	13.9	0.3	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Crawler Tractors	1.85	11.17	23.79	0.92	0.84	2062.23
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.54	10.46	16.75	0.82	0.76	2148.24
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
2.00	2	Graders	2.67	8.70	25.95	1.46	1.34	1677.56
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Rollers	0.88	3.77	7.73	0.57	0.52	698.83
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
2.00	1	Scrapers	3.64	18.14	44.24	1.78	1.64	4020.05
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
6.00		Tractors/Loaders/Backhoes	6.15	50.60	78.37	2.71	2.50	10805.47
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	17.2	105.3	201.7	8.5	7.8	21850.7
	Grading	tons per phase	0.7	4.3	8.3	0.4	0.3	901.3

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.7	4.3	8.3	0.4	0.3	901.3

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81	10.00	8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362	10.00	8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes	425.00	98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	485						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS DWSC East Levee (G&E Import Random Fill/ Topsoil)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	11.0	65.5	187.7	106.8	6.3	100.5	26.2	5.3	20.9	27,685.1		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	11.0	65.5	187.7	106.8	6.3	100.5	26.2	5.3	20.9	27,685.1		
Total (tons/construction project)	0.3	2.0	5.7	1.6	0.2	1.4	0.4	0.2	0.3	837.5		
Notes:	Project Start Year -> 2016 Project Length (months) -> 3 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 1271											
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS DWSC East Levee (G&E Import Random Fill/ Topsoil)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	5.0	29.8	85.3	48.6	2.9	45.7	11.9	2.4	9.5	12,584.2		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	5.0	29.8	85.3	48.6	2.9	45.7	11.9	2.4	9.5	12,584.2		
Total (megagrams/construction project)	0.3	1.8	5.1	1.4	0.2	1.2	0.4	0.1	0.3	759.6		
Notes:	Project Start Year -> 2016 Project Length (months) -> 3 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 972											
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS DWSC East Levee (G&E Import Random Fill/ Topsoil)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	2.8	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	1271.0	yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.28
Grading/Excavation	2.75	1.24
Drainage/Utilities/Sub-Grade	0.00	0.83
Paving	0.00	0.41
Totals	2.75	2.75

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	1.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.03	1.45	0.12	0.03	0.02	296.01	
Tons per const. Period - Grading/Excavation	0.00	0.04	0.00	0.00	0.00	8.95	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	100.5	1.4	20.9	0.3	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.54	10.46	16.75	0.82	0.76	2148.24
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	1.33	4.35	12.98	0.73	0.67	838.78
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Rollers	0.44	1.89	3.86	0.28	0.26	349.42
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Scrapers	1.82	9.07	22.12	0.89	0.82	2010.03
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
3.00		Tractors/Loaders/Backhoes	3.07	25.30	39.19	1.36	1.25	5402.74
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	9.6	59.1	111.7	4.8	4.4	12218.6
	Grading	tons per phase	0.3	1.8	3.4	0.1	0.1	369.6

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.3	1.8	3.4	0.1	0.1	369.6

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163	10.00	8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81	10.00	8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362	10.00	8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes	425.00	98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	485						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E Surfacing)												
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	7.8	36.1	111.6	71.8	4.8	67.0	18.1	4.2	13.9	14,463.1		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	7.8	36.1	111.6	71.8	4.8	67.0	18.1	4.2	13.9	14,463.1		
Total (tons/construction project)	0.0	0.2	0.6	0.2	0.0	0.2	0.1	0.0	0.0	79.5		
Notes:	Project Start Year ->	2016										
	Project Length (months) ->	1										
	Total Project Area (acres) ->	28										
	Maximum Area Disturbed/Day (acres) ->	7										
	Total Soil Imported/Exported (yd ³ /day)->	1320										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												
Emission Estimates for -> WS Sac South Levee (G&E Surfacing)												
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)		
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	3.5	16.4	50.7	32.7	2.2	30.5	8.2	1.9	6.3	6,574.1		
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	3.5	16.4	50.7	32.7	2.2	30.5	8.2	1.9	6.3	6,574.1		
Total (megagrams/construction project)	0.0	0.2	0.6	0.2	0.0	0.2	0.1	0.0	0.0	72.2		
Notes:	Project Start Year ->	2016										
	Project Length (months) ->	1										
	Total Project Area (hectares) ->	11										
	Maximum Area Disturbed/Day (hectares) ->	3										
	Total Soil Imported/Exported (meters ³ /day)->	1009										
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.												
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.												

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (G&E Surfacing)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	0.5	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	1320.0	yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	20.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.		
Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.		
		Program
	User Override of	Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.05
Grading/Excavation	0.50	0.23
Drainage/Utilities/Sub-Grade	0.00	0.15
Paving	0.00	0.08
Totals	0.50	0.50

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	3.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.08	4.36	0.37	0.09	0.05	888.03	
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	4.88	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	67.0	0.2	13.9	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	3	Excavators	1.23	8.37	13.40	0.66	0.61	1718.59
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
2.00	2	Graders	2.67	8.70	25.95	1.46	1.34	1677.56
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
	1	Other Construction Equipment	0.46	2.41	4.90	0.26	0.24	438.31
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Rollers	0.88	3.77	7.73	0.57	0.52	698.83
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Tractors/Loaders/Backhoes	0.90	3.93	8.17	0.63	0.58	839.81
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	7.1	32.8	72.0	4.0	3.7	6404.2
	Grading	tons per phase	0.0	0.2	0.4	0.0	0.0	35.2

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.0	0.2	0.4	0.0	0.0	35.2

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.							
		Default Values		Default Values			
Equipment		Horsepower		Hours/day			
Aerial Lifts		63		8			
Air Compressors		106		8			
Bore/Drill Rigs		206		8			
Cement and Mortar Mixers		10		8			
Concrete/Industrial Saws		64		8			
Cranes		226		8			
Crawler Tractors		208	10.00	8			
Crushing/Proc. Equipment		142		8			
Excavators		163		8			
Forklifts		89		8			
Generator Sets		66		8			
Graders		175	10.00	8			
Off-Highway Tractors		123		8			
Off-Highway Trucks		400		8			
Other Construction Equipment		172		8			
Other General Industrial Equipment		88		8			
Other Material Handling Equipment		167		8			
Pavers		126		8			
Paving Equipment		131		8			
Plate Compactors		8		8			
Pressure Washers		26		8			
Pumps		53		8			
Rollers		81	10.00	8			
Rough Terrain Forklifts		100		8			
Rubber Tired Dozers		255		8			
Rubber Tired Loaders		200		8			
Scrapers		362		8			
Signal Boards		20		8			
Skid Steer Loaders		65		8			
Surfacing Equipment		254		8			
Sweepers/Scrubbers		64		8			
Tractors/Loaders/Backhoes		98	10.00	8			
Trenchers		81		8			
Welders		45		8			
	40						
END OF DATA ENTRY SHEET							

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> WS Sac South Levee (G&E Import Rip Rap - Truck)											
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	3.8	20.7	99.9	136.8	2.8	134.0	30.0	2.1	27.9	17,683.7	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (pounds/day)	3.8	20.7	99.9	136.8	2.8	134.0	30.0	2.1	27.9	17,683.7	
Total (tons/construction project)	0.2	1.0	4.6	2.9	0.1	2.8	0.7	0.1	0.6	817.0	
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (acres) -> 28 Maximum Area Disturbed/Day (acres) -> 7 Total Soil Imported/Exported (yd ³ /day)-> 3200 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											
Emission Estimates for -> WS Sac South Levee (G&E Import Rip Rap - Truck)											
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)	
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-	
Grading/Excavation	1.7	9.4	45.4	62.2	1.3	60.9	13.6	1.0	12.7	8,038.0	
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-	
Paving	-	-	-	-	-	-	-	-	-	-	
Maximum (kilograms/day)	1.7	9.4	45.4	62.2	1.3	60.9	13.6	1.0	12.7	8,038.0	
Total (megagrams/construction project)	0.2	0.9	4.2	2.6	0.1	2.5	0.6	0.1	0.5	741.0	
Notes: Project Start Year -> 2016 Project Length (months) -> 4 Total Project Area (hectares) -> 11 Maximum Area Disturbed/Day (hectares) -> 3 Total Soil Imported/Exported (meters ³ /day)-> 2446 PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified. Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.											

Road Construction Emissions Model		Version 7.1.2
Data Entry Worksheet		
Note: Required data input sections have a yellow background.		
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.		
The user is required to enter information in cells C10 through C25.		
Input Type		
Project Name	WS Sac South Levee (G&E Import Rip Rap - Truck)	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	4.2	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	1.5	miles
Total Project Area	28.0	acres
Maximum Area Disturbed/Day	6.7	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	3200.0	yd ³ /day
Soil Exported		yd ³ /day
Average Truck Capacity	40.0	yd ³ (assume 20 if unknown)
<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>		
<p>The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.</p>		
<p>Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.</p>		
	User Override of	Program Calculated
Construction Periods	Construction Months	Months
Grubbing/Land Clearing	0.00	0.42
Grading/Excavation	4.20	1.89
Drainage/Utilities/Sub-Grade	0.00	1.26
Paving	0.00	0.63
Totals	4.20	4.20

Water truck default values can be overridden in cells C91 through C93 and E91 through E93.							
Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values			
	Default # Water Trucks	Number of Water Trucks	Miles Traveled/Day	Miles Traveled/Day			
Grubbing/Land Clearing - Exhaust	0.00	2		80			
Grading/Excavation - Exhaust	0.00	2		80			
Drainage/Utilities/Subgrade	0.00	1		40			
	ROG	NOx	CO	PM10	PM2.5	CO2	
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86	
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.00	0.00	0.00	0.00	0.00	0.00	
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	
Pound per day - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive dust default values can be overridden in cells C110 through C112.							
Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5	
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period	
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0	
Fugitive Dust - Grading/Excavation		6.7	134.0	2.8	27.9	0.6	
Fugitive Dust - Drainage/Utilities/Subgrade		0	0.0	0.0	0.0	0.0	

	Default							
Grading/Excavation	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Crawler Tractors	0.92	5.59	11.90	0.46	0.42	1031.11
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
2.00	3	Excavators	1.02	6.97	11.17	0.55	0.51	1432.16
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00		Tractors/Loaders/Backhoes	0.45	1.97	4.09	0.31	0.29	419.90
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	2.4	14.5	27.2	1.3	1.2	2883.2
	Grading	tons per phase	0.1	0.7	1.3	0.1	0.1	133.2

	Default							
Paving	Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	Program-estimate	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Pavers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions all Phases (tons per construction period) =>			0.1	0.7	1.3	0.1	0.1	133.2

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.					
Equipment	Default Values		Default Values		
	Horsepower		Hours/day		
Aerial Lifts	63		8		
Air Compressors	106		8		
Bore/Drill Rigs	206		8		
Cement and Mortar Mixers	10		8		
Concrete/Industrial Saws	64		8		
Cranes	226		8		
Crawler Tractors	208	10.00	8		
Crushing/Proc. Equipment	142		8		
Excavators	163	10.00	8		
Forklifts	89		8		
Generator Sets	66		8		
Graders	175		8		
Off-Highway Tractors	123		8		
Off-Highway Trucks	400		8		
Other Construction Equipment	172		8		
Other General Industrial Equipment	88		8		
Other Material Handling Equipment	167		8		
Pavers	126		8		
Paving Equipment	131		8		
Plate Compactors	8		8		
Pressure Washers	26		8		
Pumps	53		8		
Rollers	81		8		
Rough Terrain Forklifts	100		8		
Rubber Tired Dozers	255		8		
Rubber Tired Loaders	200		8		
Scrapers	362		8		
Signal Boards	20		8		
Skid Steer Loaders	65		8		
Surfacing Equipment	254		8		
Sweepers/Scrubbers	64		8		
Tractors/Loaders/Backhoes	98	10.00	8		
Trenchers	81		8		
Welders	45		8		
	30				
END OF DATA ENTRY SHEET					