

**Table 1-8. Summary of diesel particulate matter emissions estimates and recalculations**

Publication/ Study (Year of Publication)	Year for estimate, Source	PM Calculated (pounds/ d)	PM10 or DPM?	Breakdown		
				Sources	PM (pounds/d)	Problems
<b>DRAFT Berths 55-58 (1998)</b>	Estimate for 2000; (Table C1-16)	430.7	PM10	On-site	3.6	None
				To Richmond	2.3	None
				Bay Area	189.6	Based on average distance traveled of 16 miles per trip; within West Oakland average trip length would be 3-4 miles
				Long-distance	235.2	Based on average travel distance of 48 miles; within West Oakland average trip length should be 3-4 miles
	Estimate for 2003; Total for all Projects (Table C1-17)	461	PM10	On-site	22.5	None
				To Richmond	2.3	None
				Bay Area	192	Based on average distance traveled of 16 miles per trip; within West Oakland average trip length would be 3-4 miles
				Long-distance	235.8	Based on average travel distance of 48 miles; within West Oakland average trip length should be 3-4 miles
	Estimate for 2010; Total for all Projects (Table C1-18)	397.5	PM10	On-site	25	None
				To Richmond	1.9	None
				Bay Area	165.1	Based on average distance traveled of 16 miles per trip; within West Oakland average trip length would be 3-4 miles
				Long-distance	205.3	Based on average travel distance of 48 miles; within West Oakland average trip length should be 3-4 miles
<b>Fisco/Port Vision 2000 (1997)</b>	No Action Alternative for 2010 (Table N-21); (1997)	3,534.40	PM10	On-site	10.9	Includes entrained emissions
				To Richmond	2.6	Includes entrained emissions
				Bay Area	1577.5	Includes entrained emissions, and based on average distance traveled of 16 miles per trip; within West Oakland average trip length would be 3-4 miles
				Long-distance	1943.4	Includes entrained emissions, and based on average travel distance of 48 miles; within West Oakland average trip length should be 3-4 miles
	Reduced Harbor Fill Alternative for 2010 (Table N-45) (1997)	3,997.60	PM10	On-site	118.7	Includes entrained emissions
				Bay Area	1737.8	Includes entrained emissions, and based on average distance traveled of 16 miles per trip; within West Oakland average trip length would be 3-4 miles
<b>Harding ESE for 2000 (2001)</b>	2,119.75	DPM	Port Truck Activity	1,274.00	Based on expected average of 9,243 truck trips per day and average idling time of half hour per trip.	
			Diesel fueled highway trucks	674.13	This may include double counting of some truck trips related to the previous item.	
			Truck related businesses	171.62	It's still unclear to me whether or not this estimate is also double-counting some Port-related truck activity.	
<b>TIAX LLC for 2002 (2003)</b>	64	DPM	Over-the-road	44	This counts only Port-related truck activity on West Oakland streets. Intramodal trips are not counted. Over-the-highway trips are also not counted.	
			Idling	20	Idling here assumed 6300 truck trips per day, of which half idled somewhere outside of the Port gates. Idling time was assumed to be 1.5 h.	
<b>EMFAC2002 for 2000 (2003)</b>	400	DPM			Assumed 10,000 truck trips = 80% of which are over-the road truck trips; zeroed out all other forms of traffic	

**for Port-related Heavy-heavy Diesel truck activity in West Oakland.**

Recalculation / adjustment to rectify	Recalculated Total		
	Recalculated PM10/ DPM (lbs/d)	Pounds/ day	Tons/ year
None	3.6		
None	2.3		
To scale for average of 4 miles traveled within West Oakland, divide by 4. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	47.3	72.8	9.1
To scale for average of 4 miles traveled within West Oakland, divide by 12. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland	19.6		
None	22.5		
None	2.3		
To scale for average of 4 miles traveled within West Oakland, divide by 4. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	48.0	92.5	11.6
To scale for average of 4 miles traveled within West Oakland, divide by 12. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland	19.7		
None	25.0		
None	1.9		
To scale for average of 4 miles traveled within West Oakland, divide by 4. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	41.3	85.3	10.7
To scale for average of 4 miles traveled within West Oakland, divide by 12. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland	17.1		
Exhaust emissions are 21% of total particulate emission, multiply by 0.21	2.3		
Exhaust emissions are 21% of total particulate emission, multiply by 0.21	0.5		
Exhaust emissions are 21% of total particulate emission, multiply by 0.21; To scale for average of 4 miles traveled within West Oakland, divide by 4. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	82.8	119.7	15.0
Exhaust emissions are 21% of total particulate emission, multiply by 0.21; To scale for average of 4 miles traveled within West Oakland, divide by 12. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	34.0		
Exhaust emissions are 21% of total particulate emission, multiply by 0.21	24.9		
Exhaust emissions are 21% of total particulate emission, multiply by 0.21; To scale for average of 4 miles traveled within West Oakland, divide by 4. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	91.2	153.6	19.2
Exhaust emissions are 21% of total particulate emission, multiply by 0.21; To scale for average of 4 miles traveled within West Oakland, divide by 12. This will be an underestimate since DPM emissions are higher when idling and when first starting the engine, which will be in higher proportion in West Oakland than in the original calculation	37.5		
Correcting by the Ports actual numbers of TEUs moved for the month of July yields 7,843 average truck trips per day (23 d month). For the whole year, for a 250 d work year, is 6831 average trips per day, or for a 210 d work year, 8133 truck trips per day. If only half of the truck trips have idling times, then halving the idling time produces the same numerical result. Alternatively, because we know the actual numbers of TEUs moved in 2002, we can scale directly (See Table 1-7)	470 - 1080		
A conservative estimate will subtract the total above Port related truck activity from this overhead highway estimate	204.1	845.8	105.7
Leave as is, provisionally, because of the way this estimate was estimated.	171.6		
Leave as is but must add other factors back in from other EIRs for a total Port-related truck inventory. Correct for the fact that July is a low month, and that 2000 had a higher volume of TEUs than in 2002. In 2002, July accounted for 9.0 percent of year 2002 total TEUs moved. Add minimal estimates for intra-modal and trips to Richmond (from the Berths 55-58 report)	68.3	74.2	9.3
Total truck trips = 10,000; Average distance traveled per truck trip (local plus highway) = 4 miles; this includes highway truck travel but not highway trucks that don't stop at the Port of Oakland, and includes county-specific fleet age distribution and differences in emissions based on start-stop and idling times for trucks. Is still likely to be an underestimate because the relative amount of time idling and starting in West Oakland is likely to be greater than the county and state-wide average.	400.0	400	50