

# Newhall Ranch Methodology For Mitigated Emissions

Ranges of emission reduction efficiencies for the above-recommended mitigation measures for operational emissions are identified in Tables 11-6 and 11-7 of the SCAQMD's CEQA Air Quality Handbook. The CEQA Air Quality Handbook includes measures that would reduce emissions associated with motor vehicles and energy usage for residential, commercial, and industrial land uses. The SCAQMD recommends that the low end of the range should be used when selecting the efficiencies for various projects unless otherwise justified. 2

The operational emissions for Alternatives 2 through 7 were subdivided into the following categories so that the effectiveness of the mitigation measures could be applied, as appropriate, to the emissions associated with each category:

- Residential: Vehicular sources and natural gas combustion
- Commercial: Vehicular sources and natural gas combustion
- Business Park (Industrial): Vehicular sources

The emissions from natural gas combustion for the business park were included in the commercial category because the probable uses in the business park would be more similar to commercial uses than large industrial uses for the purpose of estimating the mitigation efficiency and the resultant emission reductions.

Many of the measures in the *CEQA Air Quality Handbook* cannot be quantified or would have a negligible impact on emissions. If the measures were deemed appropriate for the project, they were left in the list of measures; however, no emission reductions were calculated.

The list of measures was evaluated as to the applicability to the development under the Newhall Ranch Specific Plan, and in particular, the capability of the applicant to implement and enforce the mitigation measures. While several of the measures in Tables 11-6 and 11-7 would conceivably reduce air emissions, they would apply directly to the operations of individual residents and businesses that would inhabit Newhall Ranch over which the applicant would have little or no control. In addition, some of the measures in the Newhall Ranch Specific Plan EIR have been rendered obsolete due to changes in

No emissions reduction efficiencies are provided for  $SO_x$  emissions; however,  $SO_x$  emissions of the proposed project would be less than significant.

<sup>&</sup>lt;sup>2</sup> SCAQMD, CEQA Air Quality Handbook (Diamond Bar, California: SCAQMD, November 1993).

technology; for example, employees can use home computers to telecommute instead of the applicant constructing telecommunication centers in the project area. Lastly, those mitigation measures that are part of the project design (e.g., development of retail services in proximity to residential uses) were not included as this would result in double counting of the potential emission reductions. The effectiveness of the remaining mitigation measures was applied to the emission categories described above. The resultant emission reductions were subtracted from the unmitigated emissions, and the remaining mitigated emissions were reported. These calculations were performed for both the wintertime and summertime emission estimates. For all alternatives, the mitigated emissions of VOC, NO<sub>x</sub>, CO, and PM<sub>10</sub> remain greater than the SCAQMD thresholds of significance. Thus, the operational emissions are significant and unavoidable.

# **Summer Operational Project Emissions (Mitigated)**

Alternative 2			(lbs/	day)		
	VOC	NOx	cò	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer Emissions						
Area Sources	1,382.40	238.87	563.27	0.02	1.63	1.62
Mobile Sources	862.98	731.97	8,303.39	26.09	4,058.70	786.87
Total	2,245.38	970.84	8,866.67	26.11	4,060.33	788.49
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Summer Operational						
Emissions Plus Entrada and VCC	2,245.38	970.84	8,866.67	26.11	4,060.33	788.49
Alternative 3			(lbs/	day)		
	voc	NOx	СО	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer Emissions						
Area Sources	1,324.78	230.15	555.96	0.02	1.61	1.60
Mobile Sources	839.44	711.49	8,067.43	25.39	3,943.79	764.56
Total	2,164.23	941.64	8,623.39	25.41	3,945.40	766.16
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Summer Operational						
Emissions Plus Entrada and VCC	2,164.23	941.64	8,623.39	25.41	3,945.40	766.16
Alternative 4			(lbs/	day)		
The structure is	voc	NOx	co	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer Emissions						2.3
Area Sources	1,317.61	231.66	556.79	0.02	1.61	1.59
Mobile Sources	769.57	652.29	7,397.44	23.36	3,611.52	700.21
Total	2,087.18	883.94	7,954.23	23.38	3,613.13	701.80
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Summer Operational						
Emissions Plus Entrada	2,087.18	883.94	7,954.23	23.38	3,613.13	701.80
Alternative 5	WOG	NO	(lbs/		DM.	DM
Company Empionisms	VOC	NOx	со	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer Emissions	1,276.41	224.37	536.42	0.02	1.55	1.53
Area Sources Mobile Sources	750.08	636.23	7,212.92	22.79		682.75
Total	2,026.49	860.60	7,212.92	22.79	3,521.64 3,523.18	684.27
Thresholds (lbs/day)	2,020.49 55	55	7,749.33 550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Significant:	163	163	163	NO	165	163
Total Summer Operational						
Emissions Plus Entrada	2,026.49	860.60	7,749.33	22.81	3,523.18	684.27
Alternative 6			(lbs/	(lbs/day)		
	VOC	NOx	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Summer Emissions						
Area Sources	1,223.28	215.78	523.60	0.02	1.51	1.50
Mobile Sources	730.25	619.29	7,018.04	22.17	3,426.64	664.36
Total	1,953.53	835.06	7,541.64	22.19	3,428.15	665.87
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes

Newhall Ranch Alternative 2 With Recommended Mitigation - Summertime Emissions

		Unn	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	NO <sub>x</sub>	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	455.17	396.32	4,56
	Natural Gas	15.66	202.81	8
Commercial / Office Uses	Vehicular Sources	269.07	218.13	2,40
	Natural Gas	8.23	109.40	6
Business Park	Vehicular Sources	34.77	30.63	34
	Natural Gas	Ir	ncluded in C	omme
Total Land Uses	Vehicular Sources	759.01	645.08	7,32
	Natural Gas	23.89	312.21	15
	Consumer Products	1,071.40		
	Landscaping Area Source	74.37	4.75	41
	Architectural Coatings	96.35		
	Total Emissions	2,025.02	962.04	7,89(

Recor	nmen	ded (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency		R	educed Emis	sions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Natu	ral G	as Emissions Controls								
All Re	siden	tial Uses								
Χ		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	19.3	
	Χ	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
Χ		Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	6.1	
Χ		Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%		_	_	
Χ		Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
Χ		Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	8.1	
Χ		Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
Χ		Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
	Χ	Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	Χ	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
Χ		Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	3.0	
Х		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.4	
Comn	nercia	l and Office Uses								
Х		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
Х		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
Х		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
Х		Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1	
Х		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.3	
Х		Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х		Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%		0.2	9.3	
Х		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.1	
Х		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	16.4	
	Χ	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission	Reduction		,	R	educed Emis	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	NO <sub>x</sub>	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobile Source Emission Controls								
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.8	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.4	
X Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.4	
X Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	18.2	15.9	1
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.4	
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Implement on-site circulation plan in parking lots	NQ		NQ	NQ	NQ		-	
X Provide separate windows for fast-food restaurants	NQ	_	NO	NQ	NO		_	
X Provide video-conference facilities	NQ	_	NQ	NQ	NQ		_	
X Set up resident worker training programs to improve job/housing b	NQ	_	NQ	NO	NQ		_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ		NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ		NQ	NQ	NQ		_	
X Reduce employee parking spaces for those businesses not under Ru	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%		0.5%	0.5%	0.5%	1.1	1.1	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.5	0.7	
X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.5	0.4	
X Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ	-	_	
X Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.0	4.4	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	10.8	8.7	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	-	_	
X Paid parking at walkup kiosks	NQ	NQ	NQ	NQ	NQ	-	_	
X On-site truck loading zones	NQ		NQ	NQ	NQ		_	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	-	_	
X Provide commuter information areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

Newhall Ranch Alternative 2 With Recommended Mitigation - Summertime Emissions

Yes   No MEASURES, EFFICIENCIES, AND REDUCTIONS   VOC   NO <sub>c</sub>   CO   PM <sub>10</sub>   PM <sub>2.5</sub>   VOC   NO <sub>c</sub>   CC   Industrial Uses   Translation   No   No   No   No   No   No   No	Recon	mended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency		R	educed Emi	ssions
X   Preferential parking spaces for carpools and vanpools	Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
X   Implement on-site circulation plan in parking lots   X   Set up resident worker training programs to improve job/housing b   X   Implement home dispatching system for employees   No   No   No   No   No   No   No   N	Indus	rial Uses								
X   Set up resident worker training programs to improve job/housing b   NQ   NQ   NQ   NQ   NQ   NQ   NQ	X	Preferential parking spaces for carpools and vanpools		0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Minipize use of fleet vehicles during smog alerts				NQ	NQ	NQ		_	_	
X   Minimize use of fleet vehicles during smag alerts   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N			NQ	NQ	NQ		NQ	_	_	
X   Use low emission fleet vehicles   X   Provide commuter information areas for employers not subject to F   Negl.   Negl.			Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
Negl				_	_					
Reduce employee parking spaces for those businesses not subject   N.   N.   N.   N.   N.   N.   N.   N				NQ	NQ	NQ	-	_	_	
X   Implement compressed work-week schedules								_	_	
X   Offer loans or other incentives to employees who move locally   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N	X									
X		<u> </u>						0.0	0.0	
Note								_	_	
Note		P P								
Shuttle service from residential core area to the worksite										
X									-	
X										
No.   Utilize excess parking as park-n-ride or contribute to park-n-ride   0.1%   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0.0   0.0   0.0   0.0   0.0   0.2%   0.2%   0.2%   0.2%   0.2%   0.2%   0.2%   0.2%   0.2%   0.1	X									
X		. 5								
X										
Shuttles to major rail transit centers or multi-modal stations   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0.0										
X										
X				0.1%				0.0	0.0	
X   Reschedule truck deliveries and pickups for off-peak hours   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N								_	_	
X	Х							1.4	1.2	
NQ								_	_	
X								0.1	0.2	
NQ NQ NQ NQ NQ NQ NO							-	_	_	
VOC   NOx   CC								0.0	0.0	
Total Unmitigated Emissions   2,025.02   962.04   7,89     Reduction in Natural Gas Emissions (Pounds per day)   7.46   99.75   4     Reduction in Mobile Sources Emissions (Pounds per day)   41.30   36.47   41     Total Reduction in Emissions (Pounds per day)   48.76   136.22   46     Percentage Reduced   2.4%   14.2%   5     Total Mitigated Area Source Emissions   717.71   608.61   6,91     TOTAL MITIGATED EMISSIONS   1,976.26   825.82   7,43     SCAQMD Thresholds   55   55	Х	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
Reduction in Natural Gas Emissions (Pounds per day)   7.46   99.75   4									_	
Reduction in Mobile Sources Emissions (Pounds per day)   41.30   36.47   41     Total Reduction in Emissions (Pounds per day)   48.76   136.22   46     Percentage Reduced   2.4%   14.2%   5     Total Mitigated Area Source Emissions   1,258.55   217.21   52     Total Mitigated Mobile Source Emissions   717.71   608.61   6,91     TOTAL MITIGATED EMISSIONS   1,976.26   825.82   7,43     SCAQMD Thresholds   55   55										7,89
Total Reduction in Emissions (Pounds per day)   48.76   136.22   46										
Percentage Reduced   2.4%   14.2%   5     Total Mitigated Area Source Emissions   1,258.55   217.21   52     Total Mitigated Mobile Source Emissions   717.71   608.61   6,91     TOTAL MITIGATED EMISSIONS   1,976.26   825.82   7,43     SCAQMD Thresholds   55   55		Reduction in Mobile Sources Emissions (Pounds per da								41
Total Mitigated Area Source Emissions 1,258.55 217.21 52 Total Mitigated Mobile Source Emissions 717.71 608.61 6,91 TOTAL MITIGATED EMISSIONS 1,976.26 825.82 7,43 SCAQMD Thresholds 55 55			Total Re	duction in	Emission	s (Pounds	per day)	48.76	136.22	46
Total Mitigated Mobile Source Emissions 717.71 608.61 6,91  TOTAL MITIGATED EMISSIONS 1,976.26 825.82 7,43  SCAQMD Thresholds 55 55					Р	ercentage	Reduced	2.4%	14.2%	Ę ,
Total Mitigated Mobile Source Emissions 717.71 608.61 6,91  TOTAL MITIGATED EMISSIONS 1,976.26 825.82 7,43  SCAQMD Thresholds 55 55				Total Mitio	gated Are	a Source E	missions	1,258.55	217.21	52
TOTAL MITIGATED EMISSIONS 1,976.26 825.82 7,43  SCAQMD Thresholds 55 55									608.61	
SCAQMD Thresholds 55 55								1,976.26		
										,
Project Air Quality Impacts Significant? YES YES YES YES			F	roject Air	Quality I	mpacts Sig	gnificant?	YES	YES	YE!

## Notes:

Newhall Ranch Alternative 3 With Recommended Mitigation - Summertime Emissions

		Unn	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	NO <sub>x</sub>	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	445.23	387.66	4,46
	Natural Gas	15.37	199.01	8
Commercial / Office Uses	Vehicular Sources	267.94	217.14	2,39
	Natural Gas	8.10	107.78	6
Business Park	Vehicular Sources	33.93	29.89	34
	Natural Gas	Ir	ncluded in C	omme
Total Land Uses	Vehicular Sources	747.10	634.69	7,20
	Natural Gas	23.47	306.79	15
	Consumer Products	1,048.21		
	Landscaping Area Source	73.74	4.71	41
	Architectural Coatings	95.04		
	Total Emissions	1,987.56	946.19	7,77(

Recommended (Measures already incorporated into Project a	re marked "No.")	Emission	Reduction	Efficiency		R	educed Emis	ssions
Yes No MEASURES, EFFICIENCIES, AND REDU	CTIONS VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natural Gas Emissions Controls								
All Residential Uses								
X Use solar or low emission water heaters	11.00	% 9.5%	10.0%	4.5%	4.5%	1.7	18.9	
X Use central water heating systems	9.09	% 8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X Use built-in energy-efficient appliances	2.59	% 3.0%	3.0%	6.5%	6.5%	0.4	6.0	
X Provide shade trees to reduce heating/cooling ne	eds Neg	ıl. Negl.	Negl.	0.5%	0.5%		_	
X Use energy-efficient and automated controls for a	ir conditioners	<ul><li>Negl.</li></ul>	_	0.5%	0.5%	_	_	
X Use double-paned windows	4.59	% 4.0%	4.5%	2.5%	2.5%	0.7	8.0	
X Use energy-efficient low-sodium parking lot lights		-  -	_	0.5%	0.5%	_	_	
X Use lighting controls and energy efficient lighting	Neg	ıl. Negl.	Negl.	0.5%	0.5%	_	_	
X Use fuel cells in residential subdivisions to produc	e heat and electri Neg	ıl. 1.5%	1.0%	7.0%	7.0%	0.0	0.0	
X Orient buildings to the north	14.09	% 13.0%	13.5%	10.5%	10.5%		0.0	
X Use light-colored roof materials to reflect heat	1.59	% 1.5%	1.5%	1.5%	1.5%	0.2	3.0	
Increase energy efficiency 15 perecent above Titl	e 24 requirements 15.0°	% 15.0%	15.0%	15.0%	15.0%	2.3	29.9	
Commercial and Office Uses								
X Use solar or low emission water heaters	0.59	% 0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X Use central water heating systems	0.59	% 0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X Provide shade trees to reduce heating/cooling ne	eds 0.59	% 0.5%	0.5%	1.0%	1.0%	0.0	0.5	
X Use energy-efficient and automated controls for a	ir conditioners 1.00	% 1.0%	1.0%	1.5%	1.5%	0.1	1.1	
X Use double-paned windows	3.59	% 3.0%	3.0%	2.5%	2.5%	0.3	3.2	
X Use energy-efficient low-sodium parking lights	Neg	ıl. Negl.	Negl.	Negl.	Negl.	_	_	
X Use lighting controls and energy efficient lighting	3.09	% 8.5%	7.0%	19.5%	19.5%	0.2	9.2	
X Use light-colored roof materials to reflect heat	1.00	% 1.0%	1.0%	0.5%	0.5%	0.1	1.1	
X Increase energy efficiency 15 perecent above Titl	e 24 requirements 15.0°	% 15.0%	15.0%	15.0%	15.0%	1.2	16.2	
X Orient buildings to the north	11.00	% 13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency	,	Re	educed Emis	sions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobile Source Emission Controls								
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.8	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
X Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
X Contribute to regional transit systems	NQ	NQ	NQ	NO	NQ	_	_	
X Synchronize traffic lights on streets impacted by development	4.0%		4.0%	4.0%	4.0%	17.8	15.5	1
X Construct bicycle trails	0.1%		0.1%	0.1%	0.1%	0.4	0.4	-
A joined det siey die diens	0.1270	0.270	0.1.70	0.170	0.270	0	0	
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	-	_	
X Provide separate windows for fast-food restaurants	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide video-conference facilities	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ		NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	-	NQ	NQ	NQ	_	_	
X Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.1	1.1	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.5	0.7	
X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.5	0.4	
X Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		-	
X Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.0	4.3	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	10.7	8.7	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	-	_	
X Paid parking at walkup kiosks	NQ	NQ	NQ	NQ	NQ	_	_	
X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ		_	
X Provide commuter information areas	0.1%		0.1%	0.1%	0.1%	0.3	0.2	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

Newhall Ranch Alternative 3 With Recommended Mitigation - Summertime Emissions

Recomn	nended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction			R	educed Emi	ssions
Yes 1	o MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Industri	al Uses								
Х	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
	Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
	Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
	Minimize use of fleet vehicles during smog alerts	NQ	_	_					
	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
Χ	Provide commuter information areas for employers not subject to R	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х	Reduce employee parking spaces for those businesses not subject t	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	Implement compressed work-week schedules	1.0%	0.0	0.0					
	Offer loans or other incentives to employees who move locally	NQ	NQ		NQ	NQ	_	_	
	Trip reduction plan to achieve 1.5 AVR for businesses with less than	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Χ	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
	Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Х	Construct pedestrian facility improvements	0.2%	0.2%		0.2%	0.2%	0.1	0.1	
Х	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Synchronize traffic lights on streets impacted by development	4.0%	4.0%		4.0%	4.0%	1.4	1.2	
	Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ		NQ	NQ	_	_	
Х	Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.1	
Х	On-site truck loading zones	NQ	NQ	-	NQ	NQ	_	_	
Х	Construct bicycle trails	0.1%	0.1%		0.1%	0.1%	0.0	0.0	
Х	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_		
							VOC	NOx	CC
				Total Unm			1,987.56	946.19	7,77
				Emissions			7.33	98.01	4
	Reductio	n in Mobil	e Sources	Emissions	s (Pounds	per day)	40.73	35.96	40
		Total Re	duction in	Emissions			48.05	133.97	45
				Pe	ercentage	Reduced	2.4%	14.2%	5
			Total Mitig	gated Area	Source E	missions	1,233.13	213.49	51
		To	tal Mitiga	ted Mobile	Source E	missions	706.37	598.73	6,79
				TAL MITIO			1,939.51	812.22	7,31
						hresholds	55	55	
		P	roject Air	Quality In	npacts Sig	gnificant?	YES	YES	YE:

## Notes:

Newhall Ranch Alternative 4 With Recommended Mitigation - Summertime Emissions

		Unn	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	451.84	393.47	4,53
	Natural Gas	15.56	201.41	8
Commercial / Office Uses	Vehicular Sources	266.50	215.81	2,38
	Natural Gas	8.16	108.59	6
Business Park	Vehicular Sources	34.66	30.52	34
	Natural Gas	Ir	ncluded in C	omme
Total Land Uses	Vehicular Sources	753.00	639.80	7,26
	Natural Gas	23.72	310.00	15
	Consumer Products	1,062.99		
	Landscaping Area Source	74.11	4.74	41
	Architectural Coatings	95.72		
	Total Emissions	2,009.54	954.54	7,83:

Recommer	nded (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency		R	educed Emi:	ssions
Yes No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	$PM_{2.5}$	VOC	$NO_x$	CC
Natural G	as Emissions Controls								
All Resider	ntial Uses								
X	Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	19.1	
	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X	Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	6.0	
X	Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%		-	
Χ	Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%		-	
X	Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	8.1	
X	Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%		-	
Χ	Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%		-	
X	Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
X	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
Χ	Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%		3.0	
Х	Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.2	
Commercia	al and Office Uses								
X	Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X	Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X	Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
X	Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1	
Х	Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.3	
X	Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X	Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	9.2	
X	Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.1	
Χ	Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	16.3	
X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency	,	Re	educed Emis	sions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobile Source Emission Controls								
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.8	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.4	
X Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.4	
X Contribute to regional transit systems	NQ	NQ	NQ	NO	NQ		_	
X Synchronize traffic lights on streets impacted by development	4.0%		4.0%	4.0%	4.0%	18.1	15.7	1
X Construct bicycle trails	0.1%		0.1%	0.1%	0.1%	0.5	0.4	-
A joined det siey die diens	0.270	0.270	0.1.70	0.170	0.270	0.5	0	
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	-	_	
X Provide separate windows for fast-food restaurants	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide video-conference facilities	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ		NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	-	NQ	NQ	NQ	_	_	
X Reduce employee parking spaces for those businesses not under Ri		0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.1	1.1	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.5	0.6	
X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.5	0.4	
X Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		-	
X Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.0	4.3	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	10.7	8.6	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	-	_	
X Paid parking at walkup kiosks	NQ	NQ	NQ	NQ	NQ	_	_	
X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ		_	
X Provide commuter information areas	0.1%		0.1%	0.1%	0.1%	0.3	0.2	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

Newhall Ranch Alternative 4 With Recommended Mitigation - Summertime Emissions

Recom	mended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction			R	educed Emi	ssions
Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Indust	rial Uses								
Х	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
	X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
	X Implement home dispatching system for employees Negl. 0.1% 0.1% 0.1% 0.1%								
	X Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ	NQ	NQ	_	_	
	X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Provide commuter information areas for employers not subject to R	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х	Reduce employee parking spaces for those businesses not subject t	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
	X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
	Trip reduction plan to achieve 1.5 AVR for businesses with less that		0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Х	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
	X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Х	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.1	
Х	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.4	1.2	
	X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.2	
Х	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_		
							VOC	NOx	CC
				Total Unm			2,009.54	954.54	7,83
				Emissions			7.41	99.04	4
<u></u>	Reductio			Emissions			40.96	36.15	40
	Total Reduction in Emissions (Pounds per da							135.20	45
	Percentage Reduce							14.2%	5
	Total Mitigated Area Source Emission							215.70	52
	Total Mitigated Mobile Source Emission							603.65	6,85
			TO	TAL MITIO			1,961.17 55	819.34	7,37
	SCAQMD Threshold							55	-
		F	roject Air	Quality In	npacts Sig	gnificant?	YES	YES	YE:

## Notes:

Newhall Ranch Alternative 5 With Recommended Mitigation - Summertime Emissions

		Unn	nitigated En	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	440.02	383.11	4,41
	Natural Gas	15.19	196.71	8
Commercial / Office Uses	Vehicular Sources	265.66	215.08	2,37
	Natural Gas	8.01	106.57	6
Business Park	Vehicular Sources	33.32	29.36	33
	Natural Gas	ıI	ncluded in C	omme
Total Land Uses	Vehicular Sources	739.00	627.55	7,12
	Natural Gas	23.20	303.28	14
	Consumer Products	1,036.05		
	Landscaping Area Source	72.91	4.66	41
	Architectural Coatings	94.04		
	Total Emissions	1,965.20	935.49	7,68:

Recon	nmend	ded (Measures already incorporated into Project are marked "No.")	E	Emission F	Reduction	Efficiency	1	R	educed Emis	sions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natur	al Ga	s Emissions Controls								
All Res	sident	ial Uses								
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	18.7	
	Χ	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X		Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	5.9	
Χ		Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
Χ		Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
Χ		Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	7.9	
X		Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
Χ		Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
		Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
		Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
Χ		Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	3.0	
Х		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.5	
Comm	nercial	and Office Uses								
Х		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
Х		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
Х		Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1	
X		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.2	
X		Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Χ		Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	9.1	
Χ		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.1	
X		Increase energy efficiency 15 perecent above Title 24 requirements		15.0%	15.0%	15.0%	15.0%	1.2	16.0	
	Χ	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission	Reduction	Efficiency	′	R	educed Emis	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobile Source Emission Controls						İ		
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.8	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
X Retail services within or adjacent to residential subdivisions	1.0%		1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		_	
X Synchronize traffic lights on streets impacted by development	4.0%	_	4.0%	4.0%	4.0%	17.6	15.3	1
X Construct bicycle trails	0.1%		0.1%	0.1%	0.1%	_	0.4	-
- X   Solida det sie, die diane	0.270	0.270	0.1270	0.1.70	0.1270		<b>.</b>	
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Implement on-site circulation plan in parking lots	NQ	_	NQ	NQ	NQ		_	
X Provide separate windows for fast-food restaurants	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide video-conference facilities	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NO	NQ	NQ	NQ	NQ	_	_	
X Reduce employee parking spaces for those businesses not under Ru	0.1%	_	0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.1	1.1	
X Implement compressed work-week schedules	0.8%		1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%		0.1%	0.1%	0.1%	0.3	0.2	
X Offer travel incentives such as discounts on purchases for transit ri	NQ		NQ	NQ	NQ		_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%		0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%		0.1%	0.1%	0.1%	0.3	0.2	
X Construct bus passenger benches and shelters	0.1%		0.1%	0.1%	0.1%	0.3	0.2	
X Pricing structure for single-occupancy employee parking	1.5%		2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%		4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%		0.3%	0.1%	0.3%	0.5	0.6	
X Construct pedestrian facility improvements	0.2%		0.3%	0.3%	0.3 %	0.5	0.4	
X Include showers or other amenities for pedestrian employees' use	0.2%		0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		0.2	
X Charge visitors to park	1.5%		2.0%	2.0%	2.0%	4.0	4.3	
X Synchronize traffic lights on streets impacted by development	4.0%		4.0%	4.0%	4.0%	10.6	8.6	
X Reschedule truck deliveries and pickups for off-peak hours	4.0% NQ		4.0% NQ	4.0% NQ	4.0% NQ			
X Rescribedule truck deliveries and pickups for oil-peak hours  X Paid parking at walkup kiosks	NQ NQ		NQ NQ	NQ NQ	NQ NQ	-		
					-	-	_	
X On-site truck loading zones	NQ NQ	_	NQ	NQ NO	NQ NO	_	_	
X Implement or contribute to public outreach programs X Provide commuter information areas	0.1%	_	NQ		NQ 0.1%		0.2	
			0.1%	0.1%		0.3 0.3	0.2	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

Newhall Ranch Alternative 5 With Recommended Mitigation - Summertime Emissions

Industrial Uses   X	Recomn	nended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency		R	educed Emi	ssions
X	Yes 1	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
X   Implement on-site circulation plan in parking lots   X   Set up resident worker training programs to improve job/housing b   NQ   NQ   NQ   NQ   NQ   NQ   NQ	Industri	al Uses								
X   Set up resident worker training programs to improve job/housing b   X   Implement home dispatching system for employees   Negl   0.1%	Х	Preferential parking spaces for carpools and vanpools		0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X   Implement home dispatching system for employees   X   Minimize use of fleet vehicles during smog alerts   X   W   NQ   NQ   NQ   NQ   NQ   NQ   NQ				NQ	NQ	NQ		_	_	
X   Minimize use of fleet vehicles during smog alerts   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N			NQ	NQ	NQ	NQ	NQ	_	_	
X										
Provide commuter information areas for employers not subject to F   Negl.			NQ	NQ	NQ		NQ	_	_	
Reduce employee parking spaces for those businesses not subject   0.1%   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0.0		X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
X   Implement compressed work-week schedules		Provide commuter information areas for employers not subject to R		Negl.	Negl.			_	_	
X   Offer loans or other incentives to employees who move locally   NQ   NQ   NQ   NO   NO   NO   NO   NO	Х	Reduce employee parking spaces for those businesses not subject t	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X   Trip reduction plan to achieve 1.5 AVR for businesses with less than   0.1%   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0		X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
Name		X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
Note		r control r cont		0.1%	0.1%					
X	Х	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X		Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%		0.1	0.1	
X	Х	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Х	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X		X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X		X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Shuttles to major rail transit centers or multi-modal stations   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0.0	Х	Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
X Contribute to regional transit systems X Synchronize traffic lights on streets impacted by development X Synchronize traffic lights on streets impacted by development X Reschedule truck deliveries and pickups for off-peak hours X Reschedule truck deliveries and pickups for off-peak hours X Lunch shuttle system from worksite to food establishments 0.4% 0.5% 0.5% 0.5% 0.5% 0.5% 0.1 0.1 X On-site truck loading zones X Construct bicycle trails NQ NQ NQ NQ NQ NQ NO NO 0.0 X Implement or contribute to public outreach programs NQ NQ NQ NQ NQ NQ NQ NO 0.0 X Implement or contribute to public outreach programs NQ N	Х	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.1	
X   Synchronize traffic lights on streets impacted by development   4.0%   4.0%   4.0%   4.0%   4.0%   4.0%   1.3   1.2	Х	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X   Reschedule truck deliveries and pickups for off-peak hours   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N	Х	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X	Х	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.3	1.2	
NQ NQ NQ NQ NQ NQ NQ NO		X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
X	Х	Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.1	
X	Х	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
Total Unmitigated Emissions  Total Unmitigated Emissions  Reduction in Natural Gas Emissions (Pounds per day) Reduction in Mobile Sources Emissions (Pounds per day) Reduction in Emissions (Pounds per day)  Total Reduction in Emissions (Pounds per day) Percentage Reduced 2.4% 14.2%  Total Mitigated Area Source Emissions Total Mitigated Mobile Source Emissions TOTAL MITIGATED EMISSIONS 1,917.66 803.04 7,7	Х	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Total Unmitigated Emissions   1,965.20   935.49   7,6     Reduction in Natural Gas Emissions (Pounds per day)   7.24   96.89     Reduction in Mobile Sources Emissions (Pounds per day)   40.30   35.56   4     Total Reduction in Emissions (Pounds per day)   47.54   132.45   4     Percentage Reduced   2.4%   14.2%     Total Mitigated Area Source Emissions   1,218.96   211.05   5     Total Mitigated Mobile Source Emissions   698.70   591.99   6,2     TOTAL MITIGATED EMISSIONS   1,917.66   803.04   7,2     Total Mitigated Mobile Source Emissions   1,917.66   803.04   7,2	Χ	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
Reduction in Natural Gas Emissions (Pounds per day) Reduction in Mobile Sources Emissions (Pounds per day) Reduction in Mobile Sources Emissions (Pounds per day) Total Reduction in Emissions (Pounds per day) Percentage Reduced 2.4% 14.2%  Total Mitigated Area Source Emissions Total Mitigated Mobile Source Emissions TOTAL MITIGATED EMISSIONS 1,917.66 803.04 7,72			·	·	·	·		VOC	NOx	CC
Reduction in Mobile Sources Emissions (Pounds per day) 40.30 35.56 4  Total Reduction in Emissions (Pounds per day) 47.54 132.45 4  Percentage Reduced 2.4% 14.2%  Total Mitigated Area Source Emissions 1,218.96 211.05 5  Total Mitigated Mobile Source Emissions 698.70 591.99 6,7  TOTAL MITIGATED EMISSIONS 1,917.66 803.04 7,7					Total Unr	nitigated E	missions	1,965.20	935.49	7,68
Total Reduction in Emissions (Pounds per day)   47.54   132.45   4		Reduc	ction in Na	atural Gas	Emission	s (Pounds	per day)	7.24		4
Percentage Reduced   2.4%   14.2%		Reduction in Mobile Sources Emissions (Pounds per day							35.56	40
Percentage Reduced   2.4%   14.2%		Total Reduction in Emissions (Pounds per d							132.45	44
Total Mitigated Mobile Source Emissions 698.70 591.99 6,7  TOTAL MITIGATED EMISSIONS 1,917.66 803.04 7,2		Percentage Reduc								5
Total Mitigated Mobile Source Emissions 698.70 591.99 6,7  TOTAL MITIGATED EMISSIONS 1,917.66 803.04 7,2				Total Mitio	gated Are	a Source E	missions	1,218.96	211.05	51
TOTAL MITIGATED EMISSIONS 1,917.66 803.04 7,2									591.99	6,72
										7,23
SCAQMD Thresholds 55 55					S	CAQMD TI	nresholds	, 55	55	,
			gnificant?	YES		YE:				

## Notes:

Newhall Ranch Alternative 6 With Recommended Mitigation - Summertime Emissions

		Unn	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	430.84	375.06	4,32
	Natural Gas	14.88	192.62	8
Commercial / Office Uses	Vehicular Sources	260.91	210.83	2,32
	Natural Gas	7.87	104.70	6
Business Park	Vehicular Sources	33.88	29.85	34
	Natural Gas	Ir	ncluded in C	omme
Total Land Uses	Vehicular Sources	725.63	615.74	6,98
	Natural Gas	22.75	297.32	14
	Consumer Products	1,015.07		
	Landscaping Area Source	71.28	4.56	40
	Architectural Coatings	92.49		
	Total Emissions	1,927.22	917.62	7,53

Recon	nmend	ded (Measures already incorporated into Project are marked "No.")	[	Emission I	Reduction	Efficiency		R	educed Emis	ssions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natur	al Ga	s Emissions Controls								
All Re	sident	tial Uses								
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.6	18.3	
	Χ	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X		Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	5.8	
X		Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
Х		Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
X		Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	7.7	
X		Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
X		Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
	Χ	Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	Χ	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
Χ		Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	2.9	
Х		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.2	28.9	
Comm	nercial	l and Office Uses								
Х		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
Χ		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
Χ		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
Χ		Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.0	
X		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.1	
Χ		Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X		Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	8.9	
X		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.0	
Χ		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	15.7	
	Χ	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency	,	Re	educed Emis	sions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobile Source Emission Controls								
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.8	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
X Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
X Contribute to regional transit systems	NQ	NQ	NQ	NO	NQ	_	_	
X Synchronize traffic lights on streets impacted by development	4.0%		4.0%	4.0%	4.0%	17.2	15.0	1
X Construct bicycle trails	0.1%		0.1%	0.1%	0.1%	0.4	0.4	-
7 1 35:15th doc 515) are trained	0.1270	0.270	0.270	0.170	0.270	0	0	
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	-	_	
X Provide separate windows for fast-food restaurants	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide video-conference facilities	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ		NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	-	NQ	NQ	NQ	_	_	
X Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.0	1.1	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.5	0.6	
X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.5	0.4	
X Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		-	
X Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	3.9	4.2	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	10.4	8.4	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	-	_	
X Paid parking at walkup kiosks	NQ	NQ	NQ	NQ	NQ	_	_	
X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ		_	
X Provide commuter information areas	0.1%		0.1%	0.1%	0.1%	0.3	0.2	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

Newhall Ranch Alternative 6 With Recommended Mitigation - Summertime Emissions

	ricaucca L	missions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS  VOC NO <sub>x</sub> CO PM <sub>10</sub> PM <sub>2.5</sub> VC	OC NO <sub>x</sub>	CC
Industrial Uses		
X Preferential parking spaces for carpools and vanpools   0.1% 0.1% 0.1% 0.1% 0.1%	0.0	.0
X Implement on-site circulation plan in parking lots NQ NQ NQ NQ NQ	_	_
X Set up resident worker training programs to improve job/housing b NQ NQ NQ NQ NQ NQ	_	_
X Implement home dispatching system for employees Negl. 0.1% 0.1% 0.1% 0.1%	_ 0	.0
X Minimize use of fleet vehicles during smog alerts NQ NQ NQ NQ NQ	_	_
X Use low emission fleet vehicles NQ NQ NQ NQ NQ	_	_
X Provide commuter information areas for employers not subject to R Negl. Negl. Negl. Negl. Negl. Negl.	_	_
X Reduce employee parking spaces for those businesses not subject 0.1% 0.1% 0.1% 0.1% 0.1%	0.0	.0
X Implement compressed work-week schedules 0.8% 1.0% 1.0% 1.0% 1.0%	0.0	.0
X Offer loans or other incentives to employees who move locally NQ NQ NQ NQ NQ NQ	_	-
X Trip reduction plan to achieve 1.5 AVR for businesses with less that 0.1% 0.1% 0.1% 0.1% 0.1%		.0
X Provide or contribute to child care and after school facilities 0.1% 0.1% 0.1% 0.1% 0.1%		.0
X Provide on-site employee services such as cafeteria, banks, etc. 0.2% 0.3% 0.3% 0.3% 0.3%	-	.1
X Shuttle service from residential core area to the worksite 0.1% 0.1% 0.1% 0.1% 0.1%		.0
X Construct bus passenger benches and shelters 0.1% 0.1% 0.1% 0.1% 0.1%		.0
X Pricing structure for single-occupancy employee parking 1.5% 2.0% 2.0% 2.0% 2.0%		.0
X Utilize excess parking as park-n-ride or contribute to park-n-ride 0.1% 0.1% 0.1% 0.1% 0.1%		.0
X Construct bicycle facility improvements 0.2% 0.3% 0.3% 0.3% 0.3%		.1
X Construct pedestrian facility improvements 0.2% 0.2% 0.2% 0.2% 0.2%		.1
X Shuttles to major rail transit centers or multi-modal stations 0.1% 0.1% 0.1% 0.1% 0.1%	0.0	.0
X   Contribute to regional transit systems   NQ	_	-
X Synchronize traffic lights on streets impacted by development 4.0% 4.0% 4.0% 4.0% 4.0% 4.0%	1.4 1	.2
X Reschedule truck deliveries and pickups for off-peak hours NQ NQ NQ NQ NQ	_	_
X Lunch shuttle system from worksite to food establishments 0.4% 0.5% 0.5% 0.5% 0.5%	0.1	.1
X   On-site truck loading zones   NQ	_	-
X	0.0	.0
X Implement or contribute to public outreach programs NQ NQ NQ NQ NQ NQ		
<u>VC</u>	-	CC
	27.22 917.	
Reduction in Natural Gas Emissions (Pounds per day)	7.10 94.9	
Reduction in Mobile Sources Emissions (Pounds per day)	34.9	90 39
	16.68 129.	
Percentage Reduced	2.4% 14.2	% 5
Total Mitigated Area Source Emissions 1,19	94.49 206.9	91 50
Total Mitigated Mobile Source Emissions 68	36.05 580.	
	30.54 787.	
SCAQMD Thresholds		55
Project Air Quality Impacts Significant? YE	S YES	YE!

## Notes:

Newhall Ranch Alternative 7 With Recommended Mitigation - Summertime Emissions

		Unn	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	364.27	318.10	3,66
	Natural Gas	12.40	160.53	6
Commercial / Office Uses	Vehicular Sources	185.28	142.45	1,57
	Natural Gas	6.23	82.78	4
Business Park	Vehicular Sources	27.33	23.97	27
	Natural Gas	ıI	ncluded in C	omme
Total Land Uses	Vehicular Sources	576.88	484.52	5,51
	Natural Gas	18.63	243.31	11
	Consumer Products	844.96		
	Landscaping Area Source	59.84	3.85	33
	Architectural Coatings	74.94		
	Total Emissions	1,575.25	731.68	5,96

Recon	nmend	ed (Measures already incorporated into Project are marked "No.")	[	Emission I	Reduction	Efficiency		R	educed Emis	ssions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natur	al Ga	s Emissions Controls								
All Res	sidenti	ial Uses								
X	U	Jse solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.4	15.3	
	ΧU	Jse central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X	l	Jse built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.3	4.8	
X	F	Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
Χ	l	Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
X	l	Jse double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.6	6.4	
X	l	Jse energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
X	l	Jse lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
	ΧU	Jse fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	X	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
Χ	l	Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	2.4	
Χ	]	Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.9	24.1	
Comm	nercial	and Office Uses								
Х	l	Jse solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4	
X	U	Jse central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4	
X	F	Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.4	
X	U	Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	0.8	
X		Jse double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.2	2.5	
Χ	U	Jse energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X	l	Jse lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	7.0	
Χ	l	Jse light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	0.8	
Χ		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	0.9	12.4	
	X (	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission	Reduction	Efficiency	1	R	educed Emis	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobile Source Emission Controls						İ		
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.7	0.6	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.3	
X Retail services within or adjacent to residential subdivisions	1.0%		1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.3	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		_	
X Synchronize traffic lights on streets impacted by development	4.0%	_	4.0%	4.0%	4.0%	14.6	12.7	1
X Construct bicycle trails	0.1%		0.1%	0.1%	0.1%	_	0.3	-
Sometimes stoyers trains	0.270	0.270	0.1270	0.170	0.1270		0.0	
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.1	
X Implement on-site circulation plan in parking lots	NQ	_	NQ	NQ	NQ		_	
X Provide separate windows for fast-food restaurants	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide video-conference facilities	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	ÑQ	NQ	NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
X Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.7	0.7	
X Implement compressed work-week schedules	0.8%		1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%		0.1%	0.1%	0.1%	0.2	0.1	
X Offer travel incentives such as discounts on purchases for transit ri	NQ		NQ	NQ	NQ		_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%		0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%		0.1%	0.1%	0.1%	0.2	0.1	
X Construct bus passenger benches and shelters	0.1%		0.1%	0.1%	0.1%	0.2	0.1	
X Pricing structure for single-occupancy employee parking	1.5%		2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%		4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%		0.3%	0.1%	0.3%	0.4	0.4	
X Construct pedestrian facility improvements	0.2%		0.2%	0.2%	0.2%	0.4	0.3	
X Include showers or other amenities for pedestrian employees' use	0.2%		0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.2%	0.2 %	0.2 %	0.2 %	0.2	0.0	
X Contribute to regional transit systems	NQ		NQ	NQ	NQ		0.1	
X Charge visitors to park	1.5%		2.0%	2.0%	2.0%	2.8	2.8	
X Synchronize traffic lights on streets impacted by development	4.0%		4.0%	4.0%	4.0%	7.4	5.7	
X Reschedule truck deliveries and pickups for off-peak hours	4.0% NQ		4.0% NQ	NQ	4.0% NQ		J./ —	
X Rescribed to detail to the deliveries and pickups for on-peak flours  X Paid parking at walkup kiosks	NQ NQ		NQ NQ	NQ NQ	NQ NQ			
X On-site truck loading zones	NQ NQ			NQ NQ	NQ NQ			
X On-site truck loading zones  X Implement or contribute to public outreach programs	NQ NQ	_	NQ	NQ NQ	NQ NQ	_	_	
	0.1%	_	NQ		0.1%		0.1	
			0.1%	0.1%		0.2 0.2	0.1	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.1	

Newhall Ranch Alternative 7 With Recommended Mitigation - Summertime Emissions

Recor	nmended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction			R	educed Emi	ssions
Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Indus	trial Uses								
X	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
	X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
	X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
	X Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ	NQ	NQ	_	_	
	X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Provide commuter information areas for employers not subject to R	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X	Reduce employee parking spaces for those businesses not subject t	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
	X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
	X Trip reduction plan to achieve 1.5 AVR for businesses with less than	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Χ	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
	X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Х	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.0	
Х	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.1	1.0	
	X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.1	
X	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
							VOC	NOx	CC
				Total Unm			1,575.25	731.68	5,96
				Emissions			5.84	77.81	3
	Reduction			Emissions			30.92	26.72	30
		Total Re	duction in	Emissions			36.76 2.3%	104.53	33
	Percentage Redu							14.3%	5
	Total Mitigated Area Source						992.53 545.96	169.35	41
	Total Mitigated Mobile Source Emissic							457.80	5,20
			TO	TAL MITIO			1,538.49	627.15	5,62
						nresholds	55	55	
<u></u>		P	roject Air	Quality Ir	npacts Sig	gnificant?	YES	YES	YE!

## Notes:

# Winter Operational Project Emissions (Mitigated)

Alternative 2			(lbs/	day)		
	VOC	NOx	co	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Winter Emissions	•					
Area Sources	1,312.70	385.09	179.99	0.97	12.66	12.53
Mobile Sources	912.82	879.30	7,810.95	21.64	4,058.70	786.87
Total	2,225.52	1,264.39	7,990.95	22.61	4,071.36	799.40
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Winter Operational						
Emissions Plus Entrada and VCC	2,225.52	1,264.39	7,990.95	22.61	4,071.36	799.40
t	1					
Alternative 3	V00	NO.	(lbs/			
No. 1 5 1 1	voc	NOx	со	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Winter Emissions	4 255 25	270 27	470.60	0.00	10.16	42.02
Area Sources	1,255.35	370.37	173.60	0.93	12.16	12.03
Mobile Sources	888.18	854.67	7,590.15	21.06	3,943.79	764.56
Total	2,143.54	1,225.04	7,763.75	21.99	3,955.95	776.59
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Winter Operational						
Total Winter Operational	2 142 54	1 225 04	7 762 75	21.00	2 055 05	776 50
Emissions Plus Entrada and VCC	2,143.54	1,225.04	7,763.75	21.99	3,955.95	776.59
Alternative 4	I		(lbs/	day)		
Alternative	voc	NOx	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Winter Emissions				<u> </u>	10	2.5
Area Sources	1,248.03	373.59	174.70	0.94	12.30	12.16
Mobile Sources	815.59	783.53	6,964.36	19.37	3,611.52	700.20
Total	2,063.62	1,157.12	7,139.06	20.31	3,623.82	712.37
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
5.g	. 55	. 55	. 00			. 00
Total Winter Operational						
Emissions Plus Entrada	2,063.62	1,157.12	7,139.06	20.31	3,623.82	712.37
	,	, -	,		.,.	
Alternative 5			(lbs/			
	voc	NOx	СО	$SO_x$	PM <sub>10</sub>	PM <sub>2.5</sub>
Winter Emissions						
Area Sources	1,209.34	361.83	169.44	0.91	11.91	11.77
Mobile Sources	795.58	764.20	6,791.49	18.89	3,521.64	682.75
Total	2,004.92	1,126.04	6,960.93	19.80	3,533.54	694.51
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Winter Operational						
Emissions Plus Entrada	2,004.92	1,126.04	6,960.93	19.80	3,533.54	694.51
	1					
Alternative 6	WOC	NO	(lbs/			
Winter Francisco	voc	NOx	со	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Winter Emissions	4 457 51	247.56	460.46	0.07	44.45	44.04
Area Sources	1,157.51	347.56	163.18	0.87	11.42	11.31
Mobile Sources	774.99	743.84	6,609.08	18.39	3,426.64	664.36
Total	1,932.50	1,091.39	6,772.26	19.26	3,438.06	675.68
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes

Newhall Ranch Alternative 2 With Recommended Mitigation - Wintertime Emissions

		Unr	nitigated En	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	477.22	476.47	4,27
	Natural Gas	15.66	202.81	8
Commercial / Office Uses	Vehicular Sources	288.32	261.61	2,29
	Natural Gas	8.23	109.40	6
Business Park	Vehicular Sources	36.96	36.82	32
	Natural Gas	I	ncluded in C	Comme
Total Land Uses	Vehicular Sources	802.50	774.90	6,89
	Natural Gas	23.89	312.21	15
	Consumer Products	1,071.40		
	Architectural Coatings	96.35		
	Natural Gas Fireplaces	8.23	140.59	5
	Total Emissions	2,002.37	1,227.70	7,10

Recom	mended (Measures already incorporated into Project are marked "No.")	l	Emission F	Reduction	Efficiency	1	R	educed Emis	sions
Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natur	al Gas Emissions Controls								
All Res	idential Uses								
X	Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	19.3	
	X Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X	Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	6.1	
Χ	Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
X	Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
X	Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	8.1	
Χ	Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
X	Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
	X Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	X Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
X	Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	3.0	
Χ	Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.4	
Comm	ercial and Office Uses								
Х	Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
Х	Use central water heating systems	0.5%	0.5%	0.5%		0.5%	0.0	0.5	
Х	Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
Х	Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1	
Х	Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.3	
Х	Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X	Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	9.3	
X	Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.1	
X	Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	16.4	
	X Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recon	nmen	ded (Measures already incorporated into Project are marked "No.")		Emission	Reduction	Efficiency	/	Re	educed Emis	sions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Mobil	le So	urce Emission Controls								
Reside	ential	Uses								
	Χ	Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	Х	Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ		Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	1.0	1.0	
Х		Construct pedestrian facility improvements	0.1%		0.1%	0.1%	0.1%	0.5	0.5	
	Χ	Retail services within or adjacent to residential subdivisions	1.0%		1.3%	1.3%	1.3%	0.0	0.0	
Χ		Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
Χ		Contribute to regional transit systems	NQ		NQ	NQ	NQ	_	_	
Χ		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	19.1	19.1	1
Χ		Construct bicycle trails	0.1%		0.1%	0.1%	0.1%	0.5	0.5	
		111								
	nercia	Uses	0.10/	0.10/	0.10/	0.10/	0.10/		0.3	
Χ	V	Preferential parking spaces for carpools and vanpools	0.1%		0.1%	0.1%	0.1%	0.3	0.3	
		Implement on-site circulation plan in parking lots	NQ	_	NQ		NQ	_	-	
		Provide separate windows for fast-food restaurants	NQ	_	NQ		NQ	_	-	
		Provide video-conference facilities	NQ	_	NQ		NQ	_	-	
	X	Set up resident worker training programs to improve job/housing b	NQ		NQ		NQ	_	_	
	X	Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
	X	Minimize use of fleet vehicles during smog alerts	NQ	-	NQ		NQ	_	_	
	X	Use low emission fleet vehicles	NQ		NQ	NQ	NQ 0.10	_	_	
V	Χ	Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ		Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.2	1.3	
	X	Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
		Trip reduction plan to achieve 1.5 AVR for businesses	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
	X	Utilize satellite offices rather than regular worksite to reduce VMT	0.1%		0.1%	0.1%	0.1%	0.0	0.0	
V	Χ	Establish a home-based telecommuting program	0.1%	-	0.1%	0.1%	0.1%	0.0	0.0	
Χ		Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
		Offer travel incentives such as discounts on purchases for transit ri	NQ		NQ 0.30/	NQ	NQ 0.30/	_	_	
V	Χ	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X		Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
٨	Х	Construct bus passenger benches and shelters	0.1%	0.1% 2.0%	0.1% 2.0%	0.1% 2.0%	0.1% 2.0%	0.3	0.3 0.0	
		Pricing structure for single-occupancy employee parking	1.5% 3.1%			4.0%		0.0		
		Residential units within or adjacent to commercial developments			4.0%		4.0%	0.0	0.0	
Χ	X	Utilize excess parking as park-n-ride or contribute to park-n-ride Construct bicycle facility improvements	0.1% 0.2%	0.1% 0.3%	0.1% 0.3%	0.1% 0.3%	0.1% 0.3%	0.0 0.6	0.0 0.8	
X		4 · · · · · · · · · · · · · · · · · · ·	0.2%		0.3%	0.3%	0.3%	0.6	0.8	
^	Х	Construct pedestrian facility improvements Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.5	
Χ	^	Shuttles to major rail transit centers or multi-modal stations	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X		Contribute to regional transit systems	0.1% NQ		0.1% NQ	0.1% NQ	0.1% NQ	0.3	0.5	
X		Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.3	5.2	
X		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	11.5	10.5	
^	Х	Reschedule truck deliveries and pickups for off-peak hours	4.0% NQ		4.0% NQ		4.0% NQ	11.5	10.5	
	X	Paid parking at walkup kiosks	NQ NQ		NQ NQ		NQ NO		[	
	X	On-site truck loading zones	NQ NQ		NQ NQ		NQ NQ			
Χ	^	Implement or contribute to public outreach programs	NQ NQ		NQ NQ		NQ NQ	_	[	
X		Provide commuter information areas	0.1%		0.1%	0.1%	0.1%	0.3	0.3	
X		Construct bicycle trails	0.1%			0.1%	0.1%	0.3	0.3	
^		Construct Dicycle trails	0.170	U.1-70	0.170	U.170	U. 1 70	0.3	0.3	

Newhall Ranch Alternative 2 With Recommended Mitigation - Wintertime Emissions

Recommended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency	1	R	educed Emi	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Industrial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing t	NQ	NQ		NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide commuter information areas for employers not subject to F	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X Reduce employee parking spaces for those businesses not subject	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
X Trip reduction plan to achieve 1.5 AVR for businesses with less tha	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.1	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.5	1.5	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
X Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.2	
X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
· · · -						VOC	NOx	CC
			Total Unm	nitigated F	missions	2,002.37	1,227.70	7,10
Redu	ction in Na		Emissions			7.46	99.75	4
			Emissions			43.76	43.79	38
			Emissions	_		51.22	143.54	43
	Percentage Red							6
	Total Mitigated Area Source Emiss							16
	Total Mitigated Mobile Source Emissic							6,50
	TO	TAL MITIO	SATED EM	IISSIONS	1,951.15	1,084.16	6,66	
					nresholds	55	55	
	F	roject Air	Quality In	npacts Sig	gnificant?	YES	YES	YE:

Newhall Ranch Alternative 3 With Recommended Mitigation - Wintertime Emissions

		Unr	nitigated En	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	466.78	466.04	4,18
	Natural Gas	15.37	199.01	8
Commercial / Office Uses	Vehicular Sources	287.07	260.43	2,28
	Natural Gas	8.10	107.78	6
Business Park	Vehicular Sources	36.07	35.94	31
	Natural Gas	I	ncluded in C	omme
Total Land Uses	Vehicular Sources	789.92	762.41	6,77
	Natural Gas	23.47	306.79	15
	Consumer Products	1,048.21		
	Architectural Coatings	95.04		
	Natural Gas Fireplaces	8.07	137.87	5
	Total Emissions	1,964.71	1,207.07	6,98

Recommended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency	•	R	educed Emi:	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natural Gas Emissions Controls								
All Residential Uses								
X Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	18.9	
X Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	6.0	
X Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%		-	
X Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%		-	
X Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	8.0	
X Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	-	
X Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%		_	
X Use fuel cells in residential subdivisions to produce heat and electr		1.5%	1.0%	7.0%	7.0%	0.0	0.0	
X Orient buildings to the north	14.0%		13.5%	10.5%	10.5%		0.0	
X Use light-colored roof materials to reflect heat	1.5%		1.5%	1.5%	1.5%		3.0	
Increase energy efficiency 15 perecent above Title 24 requirement	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.9	
Commercial and Office Uses								
X Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
X Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1	
X Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.2	
X Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	-	
X Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	9.2	
X Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%		1.1	
X Increase energy efficiency 15 perecent above Title 24 requirement			15.0%	15.0%	15.0%		16.2	
X Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recommended (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency	,	Re	educed Emis	sions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Mobile Source Emission Controls								
Residential Uses								
X Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.9	
X Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
X Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
X Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	18.7	18.6	1
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
<u> </u>								
Commercial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide separate windows for fast-food restaurants	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide video-conference facilities	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
X Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.1	1.3	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Trip reduction plan to achieve 1.5 AVR for businesses	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.6	0.8	
Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.6	0.5	
X Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	-	
X Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.3	5.2	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	11.5	10.4	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
X Paid parking at walkup kiosks	NQ	NQ	NQ	NQ	NQ	_	-	
X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	-	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide commuter information areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	

Newhall Ranch Alternative 3 With Recommended Mitigation - Wintertime Emissions

Recor	nmended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency	,	Re	educed Emis	ssions
Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Indus	trial Uses								
Х	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
	X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ		NQ	_	_	
	X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
	X Minimize use of fleet vehicles during smog alerts	ÑQ	NQ	NQ	NQ	NQ	_	_	
	X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Provide commuter information areas for employers not subject to R	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х	Reduce employee parking spaces for those businesses not subject t	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
	X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
	X Trip reduction plan to achieve 1.5 AVR for businesses with less than	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Х	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
	X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Χ	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.1	
Х	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.4	1.4	
	X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
X	Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.2	
X	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
Х	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ		_	
							VOC	NOx	CC
				Total Unn	nitigated E	missions	1,964.71	1,207.07	6,98
	Reduc	tion in Na			s (Pounds		7.33	98.01	4
	Reduction						43.16	43.18	38
					s (Pounds		50.48	141.19	43
		Reduced		11.7%	E				
			Total Mitio	gated Are	a Source E	missions	1,167.46	346.65	16
					e Source E		746.76	719.23	6,39
					GATED EM		1,914.23	1,065.88	6,55
				S	CAQMD TI	nresholds	55	55	-
	Project Air Quality Impacts Significant? YES YES YE!								
-									

## Notes:

Newhall Ranch Alternative 4 With Recommended Mitigation - Wintertime Emissions

		Unr	nitigated En	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	473.76	473.04	4,24
	Natural Gas	15.56	201.41	8
Commercial / Office Uses	Vehicular Sources	285.41	258.86	2,26
	Natural Gas	8.16	108.59	6
Business Park	Vehicular Sources	36.84	36.70	32
	Natural Gas	I	ncluded in C	omme
Total Land Uses	Vehicular Sources	796.01	768.60	6,83
	Natural Gas	23.72	310.00	15
	Consumer Products	1,062.99		
	Architectural Coatings	95.72		
	Natural Gas Fireplaces	8.17	139.59	5
	Total Emissions	1,986.61	1,218.19	7,04!

Recomi	mended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency	1	R	Reduced Emissions		
Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC	
Natura	l Gas Emissions Controls									
All Resi	dential Uses									
Χ	Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	19.1		
	X Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0		
Χ	Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	6.0		
X	Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_		
Χ	Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%		_		
Χ	Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	8.1		
Χ	Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_		
Χ	Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_		
	X Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0		
	X Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0		
Χ	Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	3.0		
Х	Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.2		
Comme	rcial and Office Uses									
X	Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5		
Х	Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5		
Х	Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5		
Х	Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1		
Х	Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.3		
Х	Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_		
Х	Use lighting controls and energy efficient lighting	3.0%		7.0%	19.5%	19.5%	0.2	9.2		
Х	Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.1		
Х	Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	16.3		
	X Orient buildings to the north	11.0%		12.5%	17.5%	17.5%	0.0	0.0		

Recor	nmen	ded (Measures already incorporated into Project are marked "No.")		Emission	Reduction	Efficiency	/	Reduced Emissions			
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC	
Mobi	le So	urce Emission Controls									
Resid	ential	Uses									
	Χ	Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0		
	Х	Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0		
Χ		Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.9		
Х		Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5		
	Χ	Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0		
Χ		Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5		
Χ		Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_		
Χ		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	19.0	18.9	1	
Χ		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5		
		111									
	nercia	l Uses	0.10/	0.10/	0.10/	0.10/	0.10/		0.3		
Х	V	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3		
		Implement on-site circulation plan in parking lots	NQ	NQ	NQ		NQ	_	-		
		Provide separate windows for fast-food restaurants	NQ	NQ	NQ		NQ	_	-		
		Provide video-conference facilities	NQ	NQ	NQ		NQ	_	-		
	X	Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ		NQ	_	_		
	X	Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0		
	X	Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ		NQ	_	_		
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_		
	Χ	Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0		
Χ		Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	1.1	1.3		
	X	Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0		
		Trip reduction plan to achieve 1.5 AVR for businesses	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0		
	X	Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0		
	Χ	Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0		
Х		Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3		
		Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_		
	Χ	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0		
X		Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3		
Χ	V	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3		
		Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0		
		Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0		
	Х	Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1% 0.3%	0.1%	0.0	0.0 0.8		
X		Construct bicycle facility improvements	0.2%	0.3%	0.3% 0.2%	0.3%	0.3%	0.6			
٨	V	Construct pedestrian facility improvements	0.2%	0.2%			0.2%	0.6	0.5		
Х	Х	Include showers or other amenities for pedestrian employees' use	0.2% 0.1%	0.2% 0.1%	0.2% 0.1%	0.2% 0.1%	0.2% 0.1%	0.0 0.3	0.0 0.3		
X		Shuttles to major rail transit centers or multi-modal stations		0.1% NO			0.1% NQ	0.3	0.3		
X		Contribute to regional transit systems Charge visitors to park	NQ 1.5%	2.0%	NQ 2.0%	NQ 2.0%	2.0%	4.3	5.2		
X		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	2.0% 4.0%	11.4	10.4		
^	Х	Reschedule truck deliveries and pickups for off-peak hours		4.0% NO	4.0% NO		4.0% NQ	11.4	10.4		
	X	Paid parking at walkup kiosks	NQ NQ	NQ NO	NQ NQ		NQ NO	_	-		
	X			NQ NQ	NQ NQ		NQ NQ	_	-		
Х	^	On-site truck loading zones Implement or contribute to public outreach programs	NQ NQ		NQ NQ		NQ NQ	_	[		
X		Provide commuter information areas	0.1%	0.1%	0.1%	0.1%	0.1%				
X		Construct bicycle trails	0.1%	0.1%		0.1%	0.1%	0.3 0.3	0.3 0.3		
^		Construct dicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3		

Newhall Ranch Alternative 4 With Recommended Mitigation - Wintertime Emissions

Recommended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency	,	R	educed Emis	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Industrial Uses								
X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ	NQ	NQ	_	_	
X Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ	NQ	NQ	_	_	
X Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
X Provide commuter information areas for employers not subject to F	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
X Reduce employee parking spaces for those businesses not subject	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
X Trip reduction plan to achieve 1.5 AVR for businesses with less that	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
X Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.1	
X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.5	1.5	
X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
X Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.2	
X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
		·		·		VOC	NOx	CC
			Total Unm	nitigated E	missions	1,986.61	1,218.19	7,04
Redu	ction in Na		Emissions			7.41	99.04	4
			Emissions			43.40	43.42	38
	Total Re	duction in	Emissions	s (Pounds	per day)	50.81	142.46	43
	2.6%	11.7%	6					
		Total Mitig	gated Area	Source E	missions	1,183.19	350.55	16
	To		ted Mobile			752.61	725.18	6,44
		ŤΟ	TAL MITIO	SATED EM	IISSIONS	1,935.80	1,075.73	6,61
				CAQMD TI		55	55	
Project Air Quality Impacts Significant						YES	YES	YE:
Section Control of Con								

## Notes:

Newhall Ranch Alternative 5 With Recommended Mitigation - Wintertime Emissions

		Unr	nitigated En	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	461.32	460.58	4,13
	Natural Gas	15.19	196.71	8
Commercial / Office Uses	Vehicular Sources	284.47	257.97	2,25
	Natural Gas	8.01	106.57	6
Business Park	Vehicular Sources	35.42	35.29	31
	Natural Gas	I	ncluded in C	omme
Total Land Uses	Vehicular Sources	781.21	753.84	6,70
	Natural Gas	23.20	303.28	14
	Consumer Products	1,036.05		
	Architectural Coatings	94.04		
	Natural Gas Fireplaces	7.97	136.28	5
	Total Emissions	1,942.47	1,193.40	6,90!

Recon	nmen	ded (Measures already incorporated into Project are marked "No.")	[	mission F	Reduction	Efficiency		R	educed Emis	ssions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natui	ral G	as Emissions Controls								
All Re	siden	tial Uses								
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	18.7	
	Χ	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X		Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	5.9	
X		Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
Х		Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
X		Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	7.9	
X		Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
X		Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
	Χ	Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	Χ	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
X		Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	3.0	
Х		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.5	
Comm	nercia	al and Office Uses								
Х		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
X		Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.1	
Х		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.2	
Χ		Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х		Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	9.1	
Х		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.1	
X		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	16.0	
	Χ	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recomme	nded (Measures already incorporated into Project are marked "No.")				,	Re	sions		
Yes No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	$PM_{2.5}$	VOC	$NO_x$	CC
Mobile So	ource Emission Controls								
Residentia	al Uses								
X	Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.9	
Х	Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
X	Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
X	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	18.5	18.4	1
X	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
Commerci	ial Uses								
X	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
^ X	Implement on-site circulation plan in parking lots	NQ	NO	NQ	0.1% NQ	0.176 NQ	0.5	0.5	
X	Provide separate windows for fast-food restaurants	NQ NQ	NQ NO	NQ	NQ NQ	NQ NQ			
X	Provide video-conference facilities	NQ NQ	NQ NO	NQ	NQ NQ	NQ NO	_	_	
X	Set up resident worker training programs to improve job/housing b	NQ NQ	NQ NQ	NQ	NQ	NQ	_	_	
X	Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X	Minimize use of fleet vehicles during smog alerts	Negi. NQ	NO	NQ	NQ	NQ		0.0	
X	Use low emission fleet vehicles	NQ NQ	NQ	NQ	NQ	NQ	_		
X	Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Lunch shuttle service from a worksite to food establishments	0.1%	0.5%	0.5%	0.5%	0.5%	1.1	1.3	
X	Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X	Trip reduction plan to achieve 1.5 AVR for businesses	0.0 %	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Offer travel incentives such as discounts on purchases for transit ri	NQ	NO NO	NQ	NQ	NQ	0.5	0.5	
X	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X	Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X	Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Construct bicycle facility improvements	0.1%	0.1%	0.3%	0.1%	0.1%	0.6	0.8	
X	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.6	0.5	
X	<b>-</b> ' ' '	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X	Shuttles to major rail transit centers or multi-modal stations	0.2 %	0.2 %	0.1%	0.2 %	0.1%	0.3	0.3	
X	Contribute to regional transit systems	NQ	NO NO	NQ	NQ	NQ		-	
X	Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.3	5.2	
X	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	11.4	10.3	
X	Reschedule truck deliveries and pickups for off-peak hours	NQ	NO	NQ	NQ	NQ		-	
X	Paid parking at walkup kiosks	NQ	NQ	NQ	NQ	NQ	_	_	
X	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
X	Provide commuter information areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
	ones de sie, de d'ano	011/0	0.170	0.1 /0	01170	0.170	0.5	0.5	

Newhall Ranch Alternative 5 With Recommended Mitigation - Wintertime Emissions

Recommended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction			R	educed Emi	ssions
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS   Industrial Uses	VOC  0.1% NQ NQ Negl. 0.1% 0.8% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1	NO <sub>x</sub> 0.1% NQ NQ 0.1% NQ Negl. 0.1% 1.0% 1.0% 0.1% 0.1% 0.3% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1	CO  0.1% NQ NQ 0.1% NQ Negl. 0.1% 1.0% 1.0% 0.1% 0.1% 0.3% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1	PM <sub>10</sub> 0.1% NQ NQ 0.1% NQ Negl. 0.1% 1.0% 1.0% 0.1% 0.1% 0.3% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1	PM <sub>2.5</sub> 0.1% NQ NQ 0.1% NQ Negl. 0.1% 1.0% 1.0% 0.1% 0.1% 0.3% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1% 0.1	VOC  0.0  0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.1 0.1	NO <sub>x</sub> 0.0  0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.1 0.1	
X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	-		
		atural Gas	Total Unm Emissions Emissions	s (Pounds	per day)	VOC 1,942.47 7.24 42.69	NOx 1,193.40 96.89 42.71	CC 6,90 4 37
	Total Re	duction in	Emission			49.93	139.59	42
		otal Mitiga	gated Area ted Mobile TAL MITIO	Source E SATED EM	missions missions IISSIONS	2.6% 1,154.02 738.52 1,892.54	11.7% 342.67 711.13 1,053.81	6 15 6,32 6,48
Project Air Quality					nresholds gnificant?	YES	YES	YE!

## Notes:

Newhall Ranch Alternative 6 With Recommended Mitigation - Wintertime Emissions

		Unr	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	451.66	450.91	4,04
	Natural Gas	14.88	192.62	8
Commercial / Office Uses	Vehicular Sources	279.14	252.86	2,21
	Natural Gas	7.87	104.70	6
Business Park	Vehicular Sources	36.02	35.89	31
	Natural Gas	I	ncluded in C	omme
Total Land Uses	Vehicular Sources	766.82	739.66	6,57
	Natural Gas	22.75	297.32	14
	Consumer Products	1,015.07		
	Architectural Coatings	92.49		
	Natural Gas Fireplaces	7.81	133.46	5
	Total Emissions	1,904.94	1,170.44	6,77!

Recon	nmen	ded (Measures already incorporated into Project are marked "No.")	E	Emission I	Reduction	Efficiency		R	educed Emis	ssions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natui	ral G	as Emissions Controls								
All Re	siden	tial Uses								
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.6	18.3	
	Χ	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
X		Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.4	5.8	
X		Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
Х		Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
X		Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.7	7.7	
Χ		Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
X		Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
	Χ	Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	Χ	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
X		Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	2.9	
Х		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.2	28.9	
Comm	nercia	al and Office Uses								
Х		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.5	
X		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.5	
Х		Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	1.0	
Х		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.1	
Χ		Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х		Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	8.9	
X		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	1.0	
X		Increase energy efficiency 15 perecent above Title 24 requirements		15.0%	15.0%	15.0%	15.0%	1.2	15.7	
	Χ	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recomme	nded (Measures already incorporated into Project are marked "No.")				,	Re	educed Emis	sions	
Yes No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	$PM_{2.5}$	VOC	$NO_x$	CC
Mobile So	ource Emission Controls								
Residentia	al Uses								
X	Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.9	0.9	
Х	Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
X	Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
X	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
X	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	18.1	18.0	1
Χ	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
Commerci	ial Hoos								
X	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
^ X	Implement on-site circulation plan in parking lots	0.1% NQ	0.1% NO	0.1% NQ	0.1% NQ	0.1% NQ	0.3	0.5	
X	Provide separate windows for fast-food restaurants	NQ NQ	NQ NO	NQ NQ	NQ NQ	NQ NQ	_	[	
X	Provide video-conference facilities	NQ NQ	~	NQ	NQ NQ	NQ NO		_	
X	Set up resident worker training programs to improve job/housing b	NQ NQ	NQ NQ	NQ	NQ NQ	NQ NQ	_	_	
X	Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
X	Minimize use of fleet vehicles during smog alerts	Negi. NQ	NO	NQ	0.170 NQ	0.176 NQ		0.0	
X	Use low emission fleet vehicles	NQ NQ	NQ NQ	NQ	NQ	NQ			
X	Reduce employee parking spaces for those businesses not under Ru	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Lunch shuttle service from a worksite to food establishments	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %	1.1	1.3	
X	Implement compressed work-week schedules	0.4 %	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
X	Trip reduction plan to achieve 1.5 AVR for businesses	0.3 %	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Offer travel incentives such as discounts on purchases for transit ri	NQ	NO	NQ	NQ	NQ	0.5	0.5	
X	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X	Shuttle service from residential core area to the worksite	0.2 %	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
X	Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
X	Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Construct bicycle facility improvements	0.1 %	0.1%	0.1 %	0.1%	0.1%	0.6	0.8	
X	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.6	0.5	
X	<b>-</b> ' ' '	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X	Shuttles to major rail transit centers or multi-modal stations	0.2 %	0.2 %	0.2 %	0.2 %	0.2 %	0.3	0.3	
X	Contribute to regional transit systems	NQ	NO	NQ	NQ	NQ	0.5	0.5	
X	Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	4.2	5.1	
X	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	11.2	10.1	
X	Reschedule truck deliveries and pickups for off-peak hours	NQ	NO	NQ	NQ	NQ		-	
X	Paid parking at walkup kiosks	NQ NQ	NQ NQ	NQ	NQ	NQ		l	
X	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_1	
X	Implement or contribute to public outreach programs	NQ NQ	NQ NQ	NQ	NQ	NQ		l	
X	Provide commuter information areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
X	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.3	
	construct step are trains	0.170	0.170	0.1 /0	0.170	0.170	0.5	0.5	

Newhall Ranch Alternative 6 With Recommended Mitigation - Wintertime Emissions

Ves	Recommended (Measures already incorporated into Project are marked "No.")		Emission I	Reduction	Efficiency	1	Reduced Emiss		ssions
Yefferential parking spaces for carpools and vanpools	Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
X   Implement on-site circulation plan in parking lots   X   Set up resident worker training programs to improve job/housing b   NQ   NQ   NQ   NQ   NQ   NQ   NQ	Industrial Uses								
X   Implement on-site circulation plan in parking lots   X   Set up resident worker training programs to improve job/housing b   NQ   NQ   NQ   NQ   NQ   NQ   NQ	X Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X   Set up resident worker training programs to improve job/housing b   NQ   NQ   NQ   NQ   NQ   NQ   NQ		NO	NO	NO	NO	NO	_	_	
X   Implement home dispatching system for employees	The second second for the Second seco						_	_	
X   Minimize use of fleet vehicles during smog aierts   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N				-			_	0.0	
X   Use low emission fleet vehicles   NQ   NQ   NQ   NQ   NQ   NQ   NQ   N							_		
Negl.   Negl							_	_	
Reduce employee parking spaces for those businesses not subject   0.1%   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0.0		-	-	-		-	_	_	
March   Marc					0.1%		0.0	0.0	
X Offer loans or other incentives to employees who move locally		0.8%			1.0%		0.0	0.0	
X   Trip reduction plan to achieve 1.5 AVR for businesses with less that   0.1%   0.1%   0.1%   0.1%   0.1%   0.1%   0.0   0.0   0.0							_	_	
Note							0.0	0.0	
Provide on-site employee services such as cafeteria, banks, etc.   0.2%   0.3%   0.3%   0.3%   0.3%   0.1   0.1					0.1%		0.0	0.0	
Shuttle service from residential core area to the worksite		-			-				
Construct bus passenger benches and shelters									
X	X Construct bus passenger benches and shelters	0.1%	0.1%		0.1%	0.1%	0.0		
Construct bicycle facility improvements	X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
Construct bicycle facility improvements	X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Construct pedestrian facility improvements		0.2%	0.3%	0.3%	0.3%	0.3%	0.1		
X	X Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%		0.1	0.1	
X	X Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X		NQ	NQ	NQ	NQ	NQ	_	_	
X	X Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	1.4	1.4	
NQ	X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ	NQ	NQ	_	_	
X	X Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.2	
NQ NQ NQ NQ NQ NQ NO NO NO NO NO NO NO NO NO NO NO NO NO	X On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
NQ NQ NQ NQ NQ NQ NO NO NO NO NO NO NO NO NO NO NO NO NO	X Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Total Unmitigated Emissions	X Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
Reduction in Natural Gas Emissions (Pounds per day)       7.10       94.97       4         Reduction in Mobile Sources Emissions (Pounds per day)       41.92       41.91       37         Total Reduction in Emissions (Pounds per day)       49.02       136.89       41         Percentage Reduced       2.6%       11.7%       €         Total Mitigated Area Source Emissions       1,131.02       335.81       15         Total Mitigated Mobile Source Emissions       724.90       697.75       6,20         TOTAL MITIGATED EMISSIONS         TOTAL MITIGATED EMISSIONS       1,855.92       1,033.55       6,36         SCAQMD Thresholds       55       55							VOC	NOx	CC
Reduction in Natural Gas Emissions (Pounds per day)       7.10       94.97       4         Reduction in Mobile Sources Emissions (Pounds per day)       41.92       41.91       37         Total Reduction in Emissions (Pounds per day)       49.02       136.89       41         Percentage Reduced       2.6%       11.7%       €         Total Mitigated Area Source Emissions       1,131.02       335.81       15         Total Mitigated Mobile Source Emissions       724.90       697.75       6,20         TOTAL MITIGATED EMISSIONS         TOTAL MITIGATED EMISSIONS       1,855.92       1,033.55       6,36         SCAQMD Thresholds       55       55				Total Unn	nitigated E	missions	1,904.94	1,170.44	6,77
Reduction in Mobile Sources Emissions (Pounds per day)         41.92         41.91         37           Total Reduction in Emissions (Pounds per day)         49.02         136.89         41           Percentage Reduced         2.6%         11.7%         €           Total Mitigated Area Source Emissions         1,131.02         335.81         15           Total Mitigated Mobile Source Emissions         724.90         697.75         6,20           TOTAL MITIGATED EMISSIONS         1,855.92         1,033.55         6,36           SCAQMD Thresholds         55         55	Redu	ction in Na							
Total Reduction in Emissions (Pounds per day)  Percentage Reduced  136.89 41  Percentage Reduced  2.6% 11.7% €  Total Mitigated Area Source Emissions Total Mitigated Mobile Source Emissions TOTAL MITIGATED EMISSIONS TOTAL MITIGATED EMISSIONS SCAQMD Thresholds  TOTAL MITIGATED EMISSIONS SCAQMD Thresholds									
Percentage Reduced         2.6%         11.7%         €           Total Mitigated Area Source Emissions         1,131.02         335.81         15           Total Mitigated Mobile Source Emissions         724.90         697.75         6,20           TOTAL MITIGATED EMISSIONS         1,855.92         1,033.55         6,36           SCAQMD Thresholds         55         55							49.02	136.89	41
Total Mitigated Mobile Source Emissions         724.90         697.75         6,20           TOTAL MITIGATED EMISSIONS         1,855.92         1,033.55         6,36           SCAQMD Thresholds         55         55									
Total Mitigated Mobile Source Emissions         724.90         697.75         6,20           TOTAL MITIGATED EMISSIONS         1,855.92         1,033.55         6,36           SCAQMD Thresholds         55         55		missions	1,131.02	335.81	15				
SCAQMD Thresholds 55 55							724.90	697.75	
SCAQMD Thresholds 55 55			ŤO	TAL MITIO	SATED EM	IISSIONS			6,36
Project Air Quality Impacts Significant? YES YES YES				S	CAQMD TI	nresholds		55	
	Project Air Quality Impacts Significant?						YES	YES	YE:

## Notes:

Newhall Ranch Alternative 7 With Recommended Mitigation - Wintertime Emissions

		Unn	nitigated Em	nission
Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		VOC	$NO_x$	CC
Residential Uses (single family and multi-family units)	Vehicular Sources	382.48	382.42	3,43
	Natural Gas	12.40	160.53	6
Commercial / Office Uses	Vehicular Sources	193.36	170.83	1,49
	Natural Gas	6.23	82.78	4
Business Park	Vehicular Sources	28.99	28.82	25
	Natural Gas	ıI	ncluded in C	omme
Total Land Uses	Vehicular Sources	604.83	582.07	5,18
	Natural Gas	18.63	243.31	11
	Consumer Products	844.96		
	Architectural Coatings	74.94		
	Natural Gas Fireplaces	6.51	111.20	4
	Total Emissions	1,549.87	936.58	5,34(

Recon	nmen	ded (Measures already incorporated into Project are marked "No.")		Emission F	Reduction	Efficiency	1	R	educed Emis	sions
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Natur	ral G	as Emissions Controls								
All Re	siden	tial Uses								
Х		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.4	15.3	
	Χ	Use central water heating systems	9.0%	8.0%	8.5%	4.0%	4.0%	0.0	0.0	
Χ		Use built-in energy-efficient appliances	2.5%	3.0%	3.0%	6.5%	6.5%	0.3	4.8	
Χ		Provide shade trees to reduce heating/cooling needs	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
Χ		Use energy-efficient and automated controls for air conditioners	_	Negl.	_	0.5%	0.5%	_	_	
Χ		Use double-paned windows	4.5%	4.0%	4.5%	2.5%	2.5%	0.6	6.4	
Χ		Use energy-efficient low-sodium parking lot lights	_	_	_	0.5%	0.5%	_	_	
Χ		Use lighting controls and energy efficient lighting	Negl.	Negl.	Negl.	0.5%	0.5%	_	_	
		Use fuel cells in residential subdivisions to produce heat and electri	Negl.	1.5%	1.0%	7.0%	7.0%	0.0	0.0	
	Χ	Orient buildings to the north	14.0%	13.0%	13.5%	10.5%	10.5%	0.0	0.0	
Χ		Use light-colored roof materials to reflect heat	1.5%	1.5%	1.5%	1.5%	1.5%	0.2	2.4	
Х		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.9	24.1	
Comn	nercia	l and Office Uses								
X		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4	
Х		Use central water heating systems	0.5%	0.5%	0.5%		0.5%	0.0	0.4	
Х		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.4	
Х		Use energy-efficient and automated controls for air conditioners	1.0%	1.0%	1.0%	1.5%	1.5%	0.1	0.8	
X		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.2	2.5	
Х		Use energy-efficient low-sodium parking lights	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Χ		Use lighting controls and energy efficient lighting	3.0%	8.5%	7.0%	19.5%	19.5%	0.2	7.0	
Х		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	0.8	
Х		Increase energy efficiency 15 perecent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	0.9	12.4	
	Χ	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0	

Recor	ommended (Measures already incorporated into Project are marked "No.")			Emission	Reduction	Efficiency	Reduced Emissions			
Yes	No	MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	$PM_{10}$	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	CC
Mobi	le So	urce Emission Controls								
Resid	ential	Uses								
	Χ	Allow satellite telecommunications centers in residential subdivision	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	Х	Shuttle service from res. subdivisions to commercial core areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ		Construct bus passenger benches and shelters	0.2%	0.2%	0.2%	0.2%	0.2%	0.8	0.8	
Х		Construct pedestrian facility improvements	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
	Χ	Retail services within or adjacent to residential subdivisions	1.0%	1.3%	1.3%	1.3%	1.3%	0.0	0.0	
Χ		Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
Χ		Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
Χ		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	15.3	15.3	1
Χ		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
		111								
	nercia	l Uses	0.10/	0.10/	0.10/	0.10/	0.10		0.3	
Х	V	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	
		Implement on-site circulation plan in parking lots	NQ	NQ	NQ		NQ	-	-	
		Provide separate windows for fast-food restaurants	NQ	NQ	NQ		NQ	_	-	
		Provide video-conference facilities	NQ	NQ	NQ		NQ	_	-	
	X	Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ		NQ	_	_	
	X	Implement home dispatching system for employees	Negl.	0.1%	0.1%	0.1%	0.1%	_	0.0	
	X	Minimize use of fleet vehicles during smog alerts	NQ	NQ	NQ		NQ	_	_	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	_	_	
	Χ	Reduce employee parking spaces for those businesses not under Ri	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Χ		Lunch shuttle service from a worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.8	0.9	
	X	Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
		Trip reduction plan to achieve 1.5 AVR for businesses	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X	Utilize satellite offices rather than regular worksite to reduce VMT	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	Χ	Establish a home-based telecommuting program	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х		Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	
		Offer travel incentives such as discounts on purchases for transit ri	NQ	NQ	NQ	NQ	NQ	_	_	
	Χ	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.0	0.0	
X		Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	
Χ		Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	
		Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
		Residential units within or adjacent to commercial developments	3.1%	4.0%	4.0%	4.0%	4.0%	0.0	0.0	
	Χ	Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X		Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.4	0.5	
Χ	\ <u>'</u>	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.4	0.3	
	Х	Include showers or other amenities for pedestrian employees' use	0.2%	0.2%	0.2%	0.2%	0.2%	0.0	0.0	
X		Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	
X		Contribute to regional transit systems	NQ 1.5%	NQ	NQ 2.0%	NQ	NQ 2.0%	2.9	3.4	
X		Charge visitors to park		2.0%		2.0%		_	_	
۸	V	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	7.7	6.8	
	X	Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ		NQ	-	-	
		Paid parking at walkup kiosks	NQ	NQ	NQ		NQ	_	-	
	Χ	On-site truck loading zones	NQ NQ	NQ NO	NQ		NQ NO		-	
X		Implement or contribute to public outreach programs			NQ		۷,	l I		
X		Provide commuter information areas	0.1%	0.1%	0.1%	0.1%	0.1%	0.2 0.2	0.2 0.2	
Χ		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	

Newhall Ranch Alternative 7 With Recommended Mitigation - Wintertime Emissions

Recommended (Measures already incorporated into Project are marked "No.")		Emission Reduction Efficiency				,	Reduced Emissions		
Yes	No MEASURES, EFFICIENCIES, AND REDUCTIONS	VOC	$NO_x$	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	$NO_x$	CC
Indus	trial Uses								
Х	Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement on-site circulation plan in parking lots	NQ	NQ	NQ	NQ	NQ	_	_	
	X Set up resident worker training programs to improve job/housing b	NQ	NQ	NQ		NQ	_	_	
	X Implement home dispatching system for employees	Negl.	0.1%	0.1%		0.1%	_	0.0	
	X Minimize use of fleet vehicles during smog alerts	ÑQ	NQ	NQ	NQ	NQ	_	_	
	X Use low emission fleet vehicles	NQ	NQ	NQ		NQ	_	_	
Х	Provide commuter information areas for employers not subject to R	Negl.	Negl.	Negl.	Negl.	Negl.	_	_	
Х	Reduce employee parking spaces for those businesses not subject t	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Implement compressed work-week schedules	0.8%	1.0%	1.0%	1.0%	1.0%	0.0	0.0	
	X Offer loans or other incentives to employees who move locally	NQ	NQ	NQ	NQ	NQ	_	_	
	X Trip reduction plan to achieve 1.5 AVR for businesses with less than	0.1%	0.1%	0.1%		0.1%	0.0	0.0	
Х	Provide or contribute to child care and after school facilities	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Provide on-site employee services such as cafeteria, banks, etc.	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Х	Shuttle service from residential core area to the worksite	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
	X Pricing structure for single-occupancy employee parking	1.5%	2.0%	2.0%	2.0%	2.0%	0.0	0.0	
	X Utilize excess parking as park-n-ride or contribute to park-n-ride	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
Х	Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.1	0.1	
Χ	Construct pedestrian facility improvements	0.2%	0.2%	0.2%	0.2%	0.2%	0.1	0.1	
Х	Shuttles to major rail transit centers or multi-modal stations	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Contribute to regional transit systems	NQ	NQ	NQ	NQ	NQ	_	_	
X	Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%		4.0%	1.2	1.2	
	X Reschedule truck deliveries and pickups for off-peak hours	NQ	NQ	NQ		NQ	_	_	
X	Lunch shuttle system from worksite to food establishments	0.4%	0.5%	0.5%	0.5%	0.5%	0.1	0.1	
X	On-site truck loading zones	NQ	NQ	NQ	NQ	NQ	_	_	
X	Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.0	0.0	
X	Implement or contribute to public outreach programs	NQ	NQ	NQ	NQ	NQ	_	_	
							VOC	NOx	CC
Total Unmitigated Emissions							1,549.87	936.58	5,34
Reduction in Natural Gas Emissions (Pounds per day)							5.84	77.81	3
Reduction in Mobile Sources Emissions (Pounds per day)							32.40	32.09	28
Total Reduction in Emissions (Pounds per day)							38.23	109.90	32
Percentage Reduced							2.5%	11.7%	E
Total Mitigated Area Source Emissions							939.20	276.70	12
Total Mitigated Mobile Source Emissions							572.43 1,511.64	549.98	4,89
TOTAL MITIGATED EMISSIONS								826.68	5,02
SCAQMD Thresholds								55	·
Project Air Quality Impacts Significant?								YES	YE:
-		•							

## Notes: