

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*.¹ 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

¹ No emissions reduction efficiencies are provided for SO_x emissions; however, SO_x emissions of the proposed project would be less than significant.

² 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_x, CO, and PM₁₀ 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	CO	SO _x	PM ₁₀	PM _{2.5}
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	CO	SO _x	PM ₁₀	PM _{2.5}
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)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Summer Emissions						
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	(lbs/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Summer Emissions						
Area Sources	1,276.41	224.37	536.42	0.02	1.55	1.53
Mobile Sources	750.08	636.23	7,212.92	22.79	3,521.64	682.75
Total	2,026.49	860.60	7,749.33	22.81	3,523.18	684.27
Thresholds (lbs/day)	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	Yes	Yes
Total Summer Operational Emissions Plus Entrada	2,026.49	860.60	7,749.33	22.81	3,523.18	684.27

Alternative 6	(lbs/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 2 With Recommended Mitigation - Summertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		VOC	NO _x	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	Included in Comme		
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	7,891

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
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
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	8.1
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 electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.4
<i>Commercial and Office Uses</i>									
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	3.3
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	9.3
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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 2 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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	
<i>Commercial Uses</i>										
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	NQ	—	—	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	—	—	
	X	Reduce employee parking spaces for those businesses not under R	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	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	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	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 2 With Recommended Mitigation - Summertime Emissions

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS			Emission Reduction Efficiency					Reduced Emissions		
			VOC	NO _x	CO	PM ₁₀	PM _{2.5}	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 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	
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%	1.4	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	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	—	—	
Total Unmitigated Emissions								VOC	NOx	CC
								2,025.02	962.04	7,89
								Reduction in Natural Gas Emissions (Pounds per day)		
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	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 3 With Recommended Mitigation - Summertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		VOC	NO _x	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	Included in Comme		
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	7,771

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
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 electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.9
<i>Commercial and Office Uses</i>									
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%	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	16.2
	X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 3 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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	NQ	NQ	—	—	
X		Synchronize traffic lights on streets impacted by development	4.0%	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%	0.1%	0.4	0.4	
<i>Commercial Uses</i>										
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	NQ	—	—	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	—	—	
	X	Reduce employee parking spaces for those businesses not under R	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	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%	0.1%	0.3	0.2	
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 3 With Recommended Mitigation - Summertime Emissions

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS			Emission Reduction Efficiency					Reduced Emissions		
			VOC	NO _x	CO	PM ₁₀	PM _{2.5}	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 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	
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%	1.4	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	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								1,987.56	946.19	7,77
Reduction in Natural Gas Emissions (Pounds per day)								7.33	98.01	4
Reduction in Mobile Sources Emissions (Pounds per day)								40.73	35.96	40
Total Reduction in Emissions (Pounds per day)								48.05	133.97	45
Percentage Reduced								2.4%	14.2%	5
Total Mitigated Area Source Emissions								1,233.13	213.49	51
Total Mitigated Mobile Source Emissions								706.37	598.73	6,79
TOTAL MITIGATED EMISSIONS								1,939.51	812.22	7,31
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 4 With Recommended Mitigation - Summertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		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
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	8.1
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 electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.2
<i>Commercial and Office Uses</i>									
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	3.3
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
X		Increase energy efficiency 15 percent 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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 4 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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%	18.1	15.7	1
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.4	
<i>Commercial Uses</i>										
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	NQ	—	—	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	—	—	
	X	Reduce employee parking spaces for those businesses not under R	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	0.6	
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	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%	0.1%	0.3	0.2	
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 4 With Recommended Mitigation - Summertime Emissions

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS			Emission Reduction Efficiency					Reduced Emissions		
			VOC	NO _x	CO	PM ₁₀	PM _{2.5}	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 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	
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%	1.4	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	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 Unmitigated Emissions								2,009.54	954.54	7,83
Reduction in Natural Gas Emissions (Pounds per day)								7.41	99.04	4
Reduction in Mobile Sources Emissions (Pounds per day)								40.96	36.15	40
Total Reduction in Emissions (Pounds per day)								48.37	135.20	45
Percentage Reduced								2.4%	14.2%	5
Total Mitigated Area Source Emissions								1,249.13	215.70	52
Total Mitigated Mobile Source Emissions								712.04	603.65	6,85
TOTAL MITIGATED EMISSIONS								1,961.17	819.34	7,37
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 5 With Recommended Mitigation - Summertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	18.7
	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	5.9
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	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%	—	—
	X	Use fuel cells in residential subdivisions to produce heat and electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.5
<i>Commercial and Office Uses</i>									
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	9.1
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	16.0
	X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 5 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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	NQ	NQ	—	—	
X		Synchronize traffic lights on streets impacted by development	4.0%	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%	0.1%	0.4	0.4	
<i>Commercial Uses</i>										
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	NQ	—	—	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	—	—	
	X	Reduce employee parking spaces for those businesses not under R	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	0.6	
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	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%	10.6	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%	0.1%	0.3	0.2	
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 5 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	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 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	
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%	1.3	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	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								1,965.20	935.49	7,68
Reduction in Natural Gas Emissions (Pounds per day)								7.24	96.89	4
Reduction in Mobile Sources Emissions (Pounds per day)								40.30	35.56	40
Total Reduction in Emissions (Pounds per day)								47.54	132.45	44
Percentage Reduced								2.4%	14.2%	5
Total Mitigated Area Source Emissions								1,218.96	211.05	51
Total Mitigated Mobile Source Emissions								698.70	591.99	6,72
TOTAL MITIGATED EMISSIONS								1,917.66	803.04	7,23
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 6 With Recommended Mitigation - Summertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.6	18.3
	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	5.8
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	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%	—	—
	X	Use fuel cells in residential subdivisions to produce heat and electricity	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	2.9
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.2	28.9
<i>Commercial and Office Uses</i>									
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	1.0
X		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.1
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	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 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	15.7
	X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 6 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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	NQ	NQ	—	—	
X		Synchronize traffic lights on streets impacted by development	4.0%	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%	0.1%	0.4	0.4	
<i>Commercial Uses</i>										
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	NQ	—	—	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	—	—	
	X	Reduce employee parking spaces for those businesses not under R	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	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%	0.1%	0.3	0.2	
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.3	0.2	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 6 With Recommended Mitigation - Summertime Emissions

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS			Emission Reduction Efficiency					Reduced Emissions		
			VOC	NO _x	CO	PM ₁₀	PM _{2.5}	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 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	
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%	1.4	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	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	—	—	
Total Unmitigated Emissions								VOC	NOx	CC
								1,927.22	917.62	7,53
								Reduction in Natural Gas Emissions (Pounds per day)		
Reduction in Mobile Sources Emissions (Pounds per day)								39.58	34.90	39
Total Reduction in Emissions (Pounds per day)								46.68	129.88	44
Percentage Reduced								2.4%	14.2%	5
Total Mitigated Area Source Emissions								1,194.49	206.91	50
Total Mitigated Mobile Source Emissions								686.05	580.84	6,59
TOTAL MITIGATED EMISSIONS								1,880.54	787.74	7,09
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 7 With Recommended Mitigation - Summertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.4	15.3
	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%	0.3	4.8
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%	0.6	6.4
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 electricity	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	2.4
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.9	24.1
<i>Commercial and Office Uses</i>									
X		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4
X		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4
X		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.4
X		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
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	7.0
X		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	0.8
X		Increase energy efficiency 15 percent 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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 7 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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%	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	NQ	—	—	
X		Synchronize traffic lights on streets impacted by development	4.0%	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%	0.1%	0.4	0.3	
<i>Commercial Uses</i>										
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	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 R	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%	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%	0.2	0.1	
	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%	0.2	0.1	
X		Construct bus passenger benches and shelters	0.1%	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%	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%	0.4	0.4	
X		Construct pedestrian facility improvements	0.2%	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%	0.2%	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	0.1	
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%	2.8	2.8	
X		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	7.4	5.7	
	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%	0.1%	0.2	0.1	
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.1	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 7 With Recommended Mitigation - Summertime 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 ₁₀	PM _{2.5}	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 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	
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	0.0	
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%	1.1	1.0	
	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	0.1	
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								1,575.25	731.68	5,96
Reduction in Natural Gas Emissions (Pounds per day)								5.84	77.81	3
Reduction in Mobile Sources Emissions (Pounds per day)								30.92	26.72	30
Total Reduction in Emissions (Pounds per day)								36.76	104.53	33
Percentage Reduced								2.3%	14.3%	5
Total Mitigated Area Source Emissions								992.53	169.35	41
Total Mitigated Mobile Source Emissions								545.96	457.80	5,20
TOTAL MITIGATED EMISSIONS								1,538.49	627.15	5,62
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

Winter Operational Project Emissions (Mitigated)

Alternative 2	(lbs/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
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

Alternative 3	(lbs/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Winter Emissions						
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 Emissions Plus Entrada and VCC	2,143.54	1,225.04	7,763.75	21.99	3,955.95	776.59

Alternative 4	(lbs/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Winter Emissions						
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
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/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
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

Alternative 6	(lbs/day)					
	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Winter Emissions						
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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 2 With Recommended Mitigation - Wintertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in 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

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
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
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	8.1
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 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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.4
<i>Commercial and Office Uses</i>									
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	3.3
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	9.3
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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 2 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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%	1.0	1.0	
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%	19.1	19.1	1
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
<i>Commercial Uses</i>										
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 R	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%	1.2	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	
X		Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.6	0.8	
X		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	10.5	
	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	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 2 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 ₁₀	PM _{2.5}	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 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	
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 Unmitigated Emissions								2,002.37	1,227.70	7,10
Reduction in Natural Gas Emissions (Pounds per day)								7.46	99.75	4
Reduction in Mobile Sources Emissions (Pounds per day)								43.76	43.79	38
Total Reduction in Emissions (Pounds per day)								51.22	143.54	43
Percentage Reduced								2.6%	11.7%	€
Total Mitigated Area Source Emissions								1,192.41	353.05	16
Total Mitigated Mobile Source Emissions								758.74	731.11	6,50
TOTAL MITIGATED EMISSIONS								1,951.15	1,084.16	6,66
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 3 With Recommended Mitigation - Wintertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
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 electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.9
<i>Commercial and Office Uses</i>									
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%	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	16.2
	X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 3 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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	
<i>Commercial Uses</i>										
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 R	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	
X		Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.6	0.8	
X		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	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 3 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 ₁₀	PM _{2.5}	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 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	
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%	1.4	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	—	—	
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								1,964.71	1,207.07	6,98
Reduction in Natural Gas Emissions (Pounds per day)								7.33	98.01	4
Reduction in Mobile Sources Emissions (Pounds per day)								43.16	43.18	38
Total Reduction in Emissions (Pounds per day)								50.48	141.19	43
Percentage Reduced								2.6%	11.7%	€
Total Mitigated Area Source Emissions								1,167.46	346.65	16
Total Mitigated Mobile Source Emissions								746.76	719.23	6,39
TOTAL MITIGATED EMISSIONS								1,914.23	1,065.88	6,55
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 4 With Recommended Mitigation - Wintertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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!

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		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
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	8.1
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 electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	30.2
<i>Commercial and Office Uses</i>									
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	3.3
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
X		Increase energy efficiency 15 percent 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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 4 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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%	19.0	18.9	1
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
<i>Commercial Uses</i>										
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 R	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	
X		Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.6	0.8	
X		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%	11.4	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	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 4 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 ₁₀	PM _{2.5}	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 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	
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 Unmitigated Emissions								1,986.61	1,218.19	7,04
Reduction in Natural Gas Emissions (Pounds per day)								7.41	99.04	4
Reduction in Mobile Sources Emissions (Pounds per day)								43.40	43.42	38
Total Reduction in Emissions (Pounds per day)								50.81	142.46	43
Percentage Reduced								2.6%	11.7%	€
Total Mitigated Area Source Emissions								1,183.19	350.55	16
Total Mitigated Mobile Source Emissions								752.61	725.18	6,44
TOTAL MITIGATED EMISSIONS								1,935.80	1,075.73	6,61
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 5 With Recommended Mitigation - Wintertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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!

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.7	18.7
	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	5.9
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	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%	—	—
	X	Use fuel cells in residential subdivisions to produce heat and electricity	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
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.3	29.5
<i>Commercial and Office Uses</i>									
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	9.1
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	16.0
	X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 5 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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%	18.5	18.4	1
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
<i>Commercial Uses</i>										
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 R	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	
X		Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.6	0.8	
X		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%	11.4	10.3	
	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	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 5 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 ₁₀	PM _{2.5}	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 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	
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%	1.4	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	—	—	
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								1,942.47	1,193.40	6,90
Reduction in Natural Gas Emissions (Pounds per day)								7.24	96.89	4
Reduction in Mobile Sources Emissions (Pounds per day)								42.69	42.71	37
Total Reduction in Emissions (Pounds per day)								49.93	139.59	42
Percentage Reduced								2.6%	11.7%	€
Total Mitigated Area Source Emissions								1,154.02	342.67	15
Total Mitigated Mobile Source Emissions								738.52	711.13	6,32
TOTAL MITIGATED EMISSIONS								1,892.54	1,053.81	6,48
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 6 With Recommended Mitigation - Wintertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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!

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.6	18.3
	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	5.8
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	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%	—	—
	X	Use fuel cells in residential subdivisions to produce heat and electricity	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	2.9
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	2.2	28.9
<i>Commercial and Office Uses</i>									
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	1.0
X		Use double-paned windows	3.5%	3.0%	3.0%	2.5%	2.5%	0.3	3.1
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	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 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.2	15.7
	X	Orient buildings to the north	11.0%	13.5%	12.5%	17.5%	17.5%	0.0	0.0

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 6 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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	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%	18.1	18.0	1
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.5	0.5	
<i>Commercial Uses</i>										
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 R	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	
X		Construct bicycle facility improvements	0.2%	0.3%	0.3%	0.3%	0.3%	0.6	0.8	
X		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%	4.2	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	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	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 6 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 ₁₀	PM _{2.5}	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 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	
		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	
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%	1.4	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	—	—	
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	NO _x	CC
Total Unmitigated Emissions								1,904.94	1,170.44	6,77
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								1,855.92	1,033.55	6,36
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 7 With Recommended Mitigation - Wintertime Emissions

Input Fields

Land Use Emissions Based on URBEMIS2002 Version 8.7.0 Air Quality Modeling		Unmitigated Emission		
		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	Included in Comme		
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	5,341

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS		Emission Reduction Efficiency					Reduced Emissions		
		VOC	NO _x	CO	PM ₁₀	PM _{2.5}	VOC	NO _x	CC
Natural Gas Emissions Controls									
<i>All Residential Uses</i>									
X		Use solar or low emission water heaters	11.0%	9.5%	10.0%	4.5%	4.5%	1.4	15.3
	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%	0.3	4.8
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%	0.6	6.4
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 electricity	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	2.4
X		Increase energy efficiency 15 percent above Title 24 requirements	15.0%	15.0%	15.0%	15.0%	15.0%	1.9	24.1
<i>Commercial and Office Uses</i>									
X		Use solar or low emission water heaters	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4
X		Use central water heating systems	0.5%	0.5%	0.5%	0.5%	0.5%	0.0	0.4
X		Provide shade trees to reduce heating/cooling needs	0.5%	0.5%	0.5%	1.0%	1.0%	0.0	0.4
X		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
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	7.0
X		Use light-colored roof materials to reflect heat	1.0%	1.0%	1.0%	0.5%	0.5%	0.1	0.8
X		Increase energy efficiency 15 percent 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

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

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 ₁₀	PM _{2.5}	VOC	NO _x	CC
Mobile Source Emission Controls										
<i>Residential Uses</i>										
	X	Allow satellite telecommunications centers in residential subdivisions	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%	0.8	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	NQ	NQ	—	—	
X		Synchronize traffic lights on streets impacted by development	4.0%	4.0%	4.0%	4.0%	4.0%	15.3	15.3	1
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.4	0.4	
<i>Commercial Uses</i>										
X		Preferential parking spaces for carpools and vanpools	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	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	NQ	—	—	
	X	Use low emission fleet vehicles	NQ	NQ	NQ	NQ	NQ	—	—	
	X	Reduce employee parking spaces for those businesses not under R	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%	0.8	0.9	
	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%	0.2	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%	0.2	0.2	
X		Construct bus passenger benches and shelters	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	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%	0.4	0.5	
X		Construct pedestrian facility improvements	0.2%	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%	0.2%	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	NQ	NQ	NQ	NQ	—	—	
X		Charge visitors to park	1.5%	2.0%	2.0%	2.0%	2.0%	2.9	3.4	
X		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	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%	0.2	0.2	
X		Construct bicycle trails	0.1%	0.1%	0.1%	0.1%	0.1%	0.2	0.2	

ESTIMATED EMISSIONS REDUCTIONS EFFICIENCIES

Newhall Ranch Alternative 7 With Recommended Mitigation - Wintertime Emissions

Recommended (Measures already incorporated into Project are marked "No.") Yes No MEASURES, EFFICIENCIES, AND REDUCTIONS			Emission Reduction Efficiency					Reduced Emissions		
			VOC	NO _x	CO	PM ₁₀	PM _{2.5}	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 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	
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%	1.2	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	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%	€
Total Mitigated Area Source Emissions								939.20	276.70	12
Total Mitigated Mobile Source Emissions								572.43	549.98	4,89
TOTAL MITIGATED EMISSIONS								1,511.64	826.68	5,02
SCAQMD Thresholds								55	55	
Project Air Quality Impacts Significant?								YES	YES	YE!

Notes:

Negl. = negligible emission reductions are associated with this mitigation measure.

NQ = effectiveness of the mitigation measure has not been quantified in the CEQA Air Quality Handbook.