

Appendix C
CUMULATIVE GROWTH CALCULATIONS



Description	SFR (d.u.)	MFR (d.u.)	Retail (s.f.)	Office (s.f.)	Industrial (s.f.)	MOB (s.f.)	Hospital uses (s.f.)	Schools (s.f.)	Parks (acres)
Landmark Village/Tract 53108	308	1,136	1,033,000						
Mission Village/Tract 61105	291	5,040	1,300,000						
Homestead/Tract 60678	965	4,812	1,310,000						
PM 18108 (includes existing)					3,500,000				
Tract 60030					1,300,000				
Tract 60257	233		30,000						
Tract 60665	7								
Tract 52475	46								
Tract 53725	42								
PM 18654				200,000					
Northlake Phase 1/Tract 51852	1,696							274,000	
Castaic High School								500,000	
Riverpark/Tract 53425	439	650	16,000						26
Heritage Hills/Tract 65806	190								
UCLA Film Archives				368,730					
College of the Canyons Expansion								180,000	
Gate-King Industrial Park					4,200,000				
Milestone/Tract 61811	167								
Porta Bella/Whittaker-Bermite	1,244	1,667		1,241,179	1,241,179			261,000	30
Lyons Ranch/Tract 53653	95	95							
Tract 53419		111							
Downtown Newhall Specific Plan Area		1,092	1,017,000						
North Newhall Specific Plan Area	57	616	660,500					261,000	
Golden Valley Ranch/Tract 52414	498		618,800					261,000	
Bridgeport Market Place			130,000	30,000					5
The Keystone	319	180						274,000	4
Soledad Circle Estates	147								
Soledad Village		407	8,000						
Town Center Mall Expansion			331,860						
The Masters College Expansion		54						213,288	
Materials Recovery/Transfer Facility					160,000				
Mike Redmond's Office Park				51,300					
Jim Backer's Mixed Use Project		10		37,000					
Proposed Project ^a						153,600	125,363		
TOTAL	6,744	15,870	6,455,160	1,928,209	10,401,179	153,600	125,363	2,224,288	65
Growth Factor for Providers^b	N/A	N/A	N/A	N/A	N/A	0.00056	N/A	N/A	N/A
Growth Factor for PO Support Staff^b	N/A	N/A	N/A	N/A	N/A	4.7	N/A	N/A	N/A
Overall Growth Factor^c	3.099	3.099	0.00183	0.00242	0.00094	N/A	0.00050	0.00053	N/A
Population	20,900	49,181	11,803	4,676	9,751	380	63	1,189	N/A

TOTAL POPULATION GROWTH	97,943
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Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential MOB = Medical Office Building PO = Provider Office d.u. = dwelling unit s.f. = square foot

a) For hospital uses, the proposed In-Patient Building (125,363 square feet) would require new employees; however the proposed Central Plant (10,000 square feet) would not require additional employees. For purposes of the analysis, it was assumed that 20 percent of the total space in the MOB is devoted to diagnostic and treatment support services.

b) Source: EIP Associates, Kaiser Permanente Redwood City Medical Center Master Plan Draft EIR, 2002. Based upon the average size of 1,796 square feet per provider offices (POs) (i.e. 1 PO/1,796 s.f. = 0.00056 generation factor), 153,600 square feet of MOB would be able to support approximately 86 POs. Each of the 86 PO supports a staff ratio of 4.7 staff per provider, which results in 404 support staff. In total, the proposed MOB would generate 490 employee positions (86 practitioners and 404 support staff).

c) The population growth factor assumes 3.099 persons per household on average (Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2007, with 2000 Benchmark. Sacramento, California, May 2007). Housing units are multiplied by 3.099 to yield population growth, while employment-generating uses are multiplied by an employment factor to yield employment growth, then it is assumed (conservatively) that 25% of new employees would relocate to the area. Assuming 1/4 of new employees (and their families) move to the area and require housing, the resultant population growth would be new employees multiplied by 3.099 for each respective housing unit required to house each new employee.

	SFR (d.u.)	MFR (d.u.)	Retail (s.f.)	Office (s.f.)	Industrial (s.f.)	MOB (s.f.)	Hospital uses (s.f.)	Schools (s.f.)	Parks (acres)
Landmark Village/Tract 53108	308	1,136	1,033,000						
Mission Village/Tract 61105	291	5,040	1,300,000						
Homestead/Tract 60678	965	4,812	1,310,000						
PM 18108 (includes existing)					3,500,000				
Tract 60030					1,300,000				
Tract 60257	233		30,000						
Tract 60665	7								
Tract 52475	46								
Tract 53725	42								
PM 18654				200,000					
Northlake Phase 1/Tract 51852	1,696							274,000	
Castaic High School								500,000	
Riverpark/Tract 53425	439	650	16,000						26
Heritage Hills/Tract 65806	190								
UCLA Film Archives				368,730					
College of the Canyons Expansion								180,000	
Gate-King Industrial Park					4,200,000				
Milestone/Tract 61811	167								
Porta Bella/Whittaker-Bermite	1,244	1,667		1,241,179	1,241,179			261,000	30
Lyons Ranch/Tract 53653	95	95							
Tract 53419		111							
Downtown Newhall Specific Plan Area		1,092	1,017,000						
North Newhall Specific Plan Area	57	616	660,500					261,000	
Golden Valley Ranch/Tract 52414	498		618,800					261,000	
Bridgeport Market Place			130,000	30,000					5
The Keystone	319	180						274,000	4
Soledad Circle Estates	147								
Soledad Village		407	8,000						
Town Center Mall Expansion			331,860						
The Masters College Expansion		54						213,288	
Materials Recovery/Transfer Facility					160,000				
Mike Redmond's Office Park				51,300					
Jim Backer's Mixed Use Project		10		37,000					
<i>Proposed Project^a</i>						153,600	125,363		
TOTAL	6,744	15,870	6,455,160	1,928,209	10,401,179	153,600	125,363	2,224,288	65
Growth Factor for Providers^b	N/A	N/A	N/A	N/A	N/A	0.00056	N/A	N/A	N/A
Growth Factor for PO Support Staff^c	N/A	N/A	N/A	N/A	N/A	4.7	N/A	N/A	N/A
Overall Growth Factor^c	N/A	N/A	0.00236	0.00313	0.00121	N/A	0.00064	0.00069	N/A
Employment	N/A	N/A	15,224	6,045	12,547	490	81	1,543	N/A

TOTAL EMPLOYMENT GROWTH	35,930
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Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential MOB = Medical Office Building PO = Provider Office d.u. = dwelling unit s.f. = square foot

a) For hospital uses, the proposed In-Patient Building (125,363 square feet) would require new employees; however the proposed Central Plant (10,000 square feet) would not require additional employees. For purposes of the analysis, it was assumed that 20 percent of the total space in the MOB is devoted to diagnostic and treatment support services.

b) Source: EIP Associates, Kaiser Permanente Redwood City Medical Center Master Plan Draft EIR, 2002. Based upon the average size of 1,796 square feet per provider offices (POs) (i.e. 1 PO/1,796 s.f. = 0.00056 generation factor), 153,600 square feet of MOB is devoted to support approximately 86 POs. Each of the 86 PO supports a staff ratio of 4.7 staff per provider, which results in 404 support staff. In total, the proposed MOB is devoted to support approximately 86 practitioners and 404 support staff.

c) Employment Density Summary Report, prepared by the Natelson Company, Southern California Association of Governments, October 31, 2001, Page 4. Source available at http://www.scag.ca.gov/forecast/downloads/employ_den.pdf (Accessed August 18, 2008).

Description	SFR (s.f.) ^a	MFR (s.f.) ^b	Retail (s.f.)	Office (s.f.)	Industrial (s.f.)	Private School (s.f.)	Schools (s.f.)	Parks (acres)
Landmark Village/Tract 53108	616,000	1,363,200	1,033,000					
Mission Village/Tract 61105	582,000	6,048,000	1,300,000					
Homestead/Tract 60678	1,930,000	5,774,400	1,310,000					
PM 18108 (includes existing)					3,500,000			
Tract 60030					1,300,000			
Tract 60257	466,000		30,000					
Tract 60665	14,000							
Tract 52475	92,000							
Tract 53725	84,000							
PM 18654				200,000				
Northlake Phase 1/Tract 51852	3,392,000						274,000	
Castaic High School							500,000	
Riverpark/Tract 53425	878,000	780,000	16,000					26
Heritage Hills/Tract 65806	380,000							
UCLA Film Archives				368,730				
College of the Canyons Expansion							180,000	
Gate-King Industrial Park					4,200,000			
Milestone/Tract 61811	334,000							
Porta Bella/Whittaker-Bermite	2,488,000	2,000,400		1,241,179	1,241,179		261,000	30
Lyons Ranch/Tract 53653	190,000	114,000						
Tract 53419		133,200						
Downtown Newhall Specific Plan Area		1,310,400	1,017,000					
North Newhall Specific Plan Area	114,000	739,200	660,500				261,000	
Golden Valley Ranch/Tract 52414	996,000		618,800				261,000	
Bridgeport Market Place			130,000	30,000				5
The Keystone	638,000	216,000					274,000	4
Soledad Circle Estates	294,000							
Soledad Village		488,400	8,000					
Town Center Mall Expansion			331,860					
The Masters College Expansion		64,800				213,288		
Materials Recovery/Transfer Facility					160,000			
Mike Redmond's Office Park				51,300				
Jim Backer's Mixed Use Project		12,000		37,000				
<i>Proposed Project^c</i>				192,000	125,363			
TOTAL	13,488,000	19,044,000	6,455,160	2,120,209	10,526,542	213,288	2,011,000	65
Impact Fee Factor ^d	\$0.9341	\$0.9341	\$0.9341	\$0.9341	\$0.9341	\$0.9341	N/A	N/A
Fire Impact Fees	\$12,599,141	\$17,789,000	\$6,029,765	\$1,980,487	\$9,832,843	\$199,232	N/A	N/A

Total Fire Impact Fees	\$48,430,469
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Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential s.f. = square feet

a) Fire impact fee calculations assume each Single-Family Residential dwelling unit equates to 2,000 square feet (2,000s.f. per SFR).

b) Fire impact fee calculations assume each Multi-Family Residential dwelling unit equates to 1,200 square feet (1200 s.f. per MFR).

c) For office uses, the Project proposes the construction 200,000 square feet of Medical Office Buildings (MOB) and the demolition of a 8,000-square foot office building. As such, the proposed Project would result in a net increase in MOB's by 192,000 square feet.

d) Current (2008) fees for fire service impacts are \$0.9341 per square foot of new development for all land uses.

Description	SFR (d.u.)	MFR (d.u.)	Retail (s.f.)	Office (s.f.)	Industrial (s.f.)	Hospital Uses (beds)	MOBs (s.f.)	Hospital/Central Plant (s.f.)	Foundation & Administrative Office Building (s.f.)	Schools (s.f.)	Parks (acres)
Landmark Village/Tract 53108 ^a											
Mission Village/Tract 61105 ^a											
Homestead/Tract 60678 ^a											
PM 18108 (includes existing)					3,500,000						
Tract 60030					1,300,000						
Tract 60257	233		30,000								
Tract 60665	7										
Tract 52475	46										
Tract 53725	42										
PM 18654				200,000							
Northlake Phase 1/Tract 51852	1,696									274,000	
Castaic High School										500,000	
Riverpark/Tract 53425	439	650	16,000								26
Heritage Hills/Tract 65806	190										
UCLA Film Archives				368,730							
College of the Canyons Expansion										180,000	
Gate-King Industrial Park					4,200,000						
Milestone/Tract 61811	167										
Porta Bella/Whittaker-Bermite	1,244	1,667		1,241,179	1,241,179					261,000	30
Lyons Ranch/Tract 53653	95	95									
Tract 53419		111									
Downtown Newhall Specific Plan Area		1,092	1,017,000								
North Newhall Specific Plan Area	57	616	660,500							261,000	
Golden Valley Ranch/Tract 52414	498		618,800							261,000	
Bridgeport Market Place			130,000	30,000							5
The Keystone	319	180								274,000	4
Soledad Circle Estates	147										
Soledad Village		407	8,000								
Town Center Mall Expansion			331,860								
The Masters College Expansion		54								213,288	
Materials Recovery/Transfer Facility					160,000						
Mike Redmond's Office Park				51,300							
Jim Backer's Mixed Use Project		10		37,000							
<i>Proposed Project</i>						147	200,000	10,000	-8,000		
TOTAL	5,180	4,882	2,812,160	1,928,209	10,401,179	147	200,000	10,000	-8,000	2,224,288	65
Generation Factor (gpd) ^b	260	156	0.10	0.20	0.025	319	0.30	0.025	0.20	0.20	0.1000
Total (gpd)	1,346,800	761,592	281,216	385,642	260,029	46,893	60,000	250	-1,600	444,858	6.5
Total Daily Peak Wastewater Generation (gpd)											3,585,687
Total Daily Peak Wastewater Generation (mgd)											3.6

Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential MOB = Medical Office Building d.u. = dwelling unit s.f. = square foot gpd = gallons per day mgd = million gallons per day

a) The Landmark Village, Mission Village and Homestead projects were not included in wastewater cumulative calculations because these projects would not be served by the Santa Clarita Valley Joint Sewerage System.

b) Proposed Project Wastewater Generation Factor Source: Telephone conversation with Ruth Frazen, Engineering Technician, Sanitation Districts of Los Angeles County (LACSD), September 20, 2007. Cumulative Projects Wastewater Generation Factor Source: LACSD, Santa Clarita Valley Sanitation District Connection Fee Loading, Capacity, and Unit Rate, http://www.lacsd.org/info/wastewater_services/new_cf_sc_rates_2008_09.asp (Accessed August 18, 2008).

Description	SFR (d.u.)	MFR (d.u.)	Retail (s.f.)	Office (s.f.)	Industrial (s.f.)	MOB (s.f.)	Hospital uses (bed)	Schools (sq ft)	Parks (acres)
Landmark Village/Tract 53108	308	1,136	1,033,000						
Mission Village/Tract 61105	291	5,040	1,300,000						
Homestead/Tract 60678	965	4,812	1,310,000						
PM 18108 (includes existing)					3,500,000				
Tract 60030					1,300,000				
Tract 60257	233		30,000						
Tract 60665	7								
Tract 52475	46								
Tract 53725	42								
PM 18654				200,000					
Northlake Phase 1/Tract 51852	1,696							274,000	
Castaic High School								500,000	
Riverpark/Tract 53425	439	650	16,000						26
Heritage Hills/Tract 65806	190								
UCLA Film Archives				368,730					
College of the Canyons Expansion								180,000	
Gate-King Industrial Park					4,200,000				
Milestone/Tract 61811	167								
Porta Bella/Whittaker-Bermite	1,244	1,667		1,241,179	1,241,179			261,000	30
Lyons Ranch/Tract 53653	95	95							
Tract 53419		111							
Downtown Newhall Specific Plan Area		1,092	1,017,000						
North Newhall Specific Plan Area	57	616	660,500					261,000	
Golden Valley Ranch/Tract 52414	498		618,800					261,000	
Bridgeport Market Place			130,000	30,000					5
The Keystone	319	180						274,000	4
Soledad Circle Estates	147								
Soledad Village		407	8,000						
Town Center Mall Expansion			331,860						
The Masters College Expansion		54						213,288	
Materials Recovery/Transfer Facility					160,000				
Mike Redmond's Office Park				51,300					
Jim Backer's Mixed Use Project		10		37,000					
Proposed Project ^a					10,000	192,000	147		
TOTAL	6,744	15,870	6,455,160	1,928,209	10,411,179	192,000	147	2,224,288	65
Growth Factor (lbs/sq ft/day)	10	4	0.006	0.006	0.006	N/A	N/A	0.007	N/A
Growth Factor (lbs/bed/day)	N/A	N/A	N/A	N/A	N/A	N/A	16	N/A	N/A
Growth Factor (tons/sq ft/year)	N/A	N/A	N/A	N/A	N/A	0.0108	N/A	N/A	N/A
Sub total Solid waste (lb/day)	67,440	63,480	38,731	11,569	62,467	11,362	2,352	15,570	N/A
Sub total Solid Waste (tons/unit/day)	34	32	19	6	31	6	1	8	N/A

TOTAL DAILY SOLID WASTE GENERATION (tpd)	137
TOTAL ANNUAL SOLID WASTE GENERATION (tons/year)	50,005

Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential MOB = Medical Office Building d.u. = dwelling unit s.f. = square foot tpd = tons per day lb = pound
1 tons = 2000 lbs. 1 lb = 0.0005 tons. 1 ton = 2,000 lbs.

a) For office uses, the Project proposes the construction 200,000 square feet of Medical Office Buildings (MOB) and the demolition of a 8,000-square foot office building. As such, the proposed Project would result in a net increase in MOB's by 192,000 square feet.

Generation factors are in tons per day per dwelling unit or square foot, as appropriate, and are derived from the California Integrated Waste Management Board website. (<http://www.ciwm.ca.gov/WasteChar/WasteGenRates/default.htm>), accessed January 28, 2008.

Description	SFR (d.u.)	MFR (d.u.)	Retail (s.f.)	Office (s.f.)	Industrial (s.f.) ^a	MOB and Hospital Uses (s.f.)	College (s.f.)	High/MiddleSchool (s.f.) ^b	Elementary School	Parks (acres)
Landmark Village/Tract 53108	308	1,136	1,033,000							
Mission Village/Tract 61105	291	5,040	1,300,000							
Homestead/Tract 60678	965	4,812	1,310,000							
PM 18108 (includes existing)					3,500,000					
Tract 60030					1,300,000					
Tract 60257	233		30,000							
Tract 60665	7									
Tract 52475	46									
Tract 53725	42									
PM 18654				200,000						
Northlake Phase 1/Tract 51852	1,696							274,000		
Castaic High School								500,000		
Riverpark/Tract 53425	439	650	16,000							26
Heritage Hills/Tract 65806	190									
UCLA Film Archives				368,730						
College of the Canyons Expansion							180,000			
Gate-King Industrial Park					4,200,000					
Milestone/Tract 61811	167									
Porta Bella/Whittaker-Bermite	1,244	1,667		1,241,179	1,241,179				261,000	30
Lyons Ranch/Tract 53653	95	95								
Tract 53419		111								
Downtown Newhall Specific Plan Area		1,092	1,017,000							
North Newhall Specific Plan Area	57	616	660,500						261,000	
Golden Valley Ranch/Tract 52414	498		618,800						261,000	
Bridgeport Market Place			130,000	30,000						5
The Keystone	319	180						274,000		4
Soledad Circle Estates	147									
Soledad Village		407	8,000							
Town Center Mall Expansion			331,860							
The Masters College Expansion		54					213,288			
Materials Recovery/Transfer Facility					160,000					
Mike Redmond's Office Park				51,300						
Jim Backer's Mixed Use Project		10		37,000						
<i>Proposed Project^c</i>						327,363				
TOTAL	6,744	15,870	6,455,160	1,928,209	10,401,179	327,363	393,288	1,048,000	783,000	65
Consumption Factor ^d	5,626.5	5,626.5	13.55	12.95	10.50	21.7	11.55	10.50	5.90	N/A
Annual Electricity Consumption (kWh)	37,945,116	89,292,555	87,467,418	24,970,307	109,212,380	7,103,777	4,542,476	11,004,000	4,619,700	N/A

Total Annual Cumulative Electricity Consumption (kWh)										376,157,729
Total Annual Cumulative Electricity Consumption (MWh)										376,158

Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential MOB = Medical Office Building d.u. = dwelling unit s.f. = square foot kWh = kilowatt-hours MWh = megawatt-hours

1000 kWh = 1 MWh

a) No factor exists for industrial uses. In order to provide a conservative analysis, the Miscellaneous factor was applied.

b) No factor exists for middle schools. In order to provide a conservative analysis, the High School factor was applied.

c) The proposed Project includes the new construction of 125,363 square feet (s.f.) of Hospital Uses and 200,000 s.f. of MOB, and the demolition of 8,000 s.f. of MOB. As such, the total net new square footage for MOB and Hospital Uses is 327,363 square feet (i.e. 125,363 s.f. Hospital Uses + 200,000 s.f. MOB - 8,000 s.f. MOB).

d) Consumption factors are in kilowatt-hours per dwelling unit or square foot, as applicable, and are from the South Coast Air Quality Management District's

CEQA Air Quality Handbook (1993), Table A9-11-A.

Description	SFR (d.u.)	MFR (d.u.)	Retail (s.f.)	Office (s.f.)	Industrial (s.f.) ^a	Hospital Uses & Support Facilities ^b	Schools (s.f.) ^b	Parks (acres)
Landmark Village/Tract 53108	308	1,136	1,033,000					
Mission Village/Tract 61105	291	5,040	1,300,000					
Homestead/Tract 60678	965	4,812	1,310,000					
PM 18108 (includes existing)					3,500,000			
Tract 60030					1,300,000			
Tract 60257	233		30,000					
Tract 60665	7							
Tract 52475	46							
Tract 53725	42							
PM 18654				200,000				
Northlake Phase 1/Tract 51852	1,696						274,000	
Castaic High School							500,000	
Riverpark/Tract 53425	439	650	16,000					26
Heritage Hills/Tract 65806	190							
UCLA Film Archives				368,730				
College of the Canyons Expansion							180,000	
Gate-King Industrial Park					4,200,000			
Milestone/Tract 61811	167							
Porta Bella/Whittaker-Bermite	1,244	1,667		1,241,179	1,241,179		261,000	30
Lyons Ranch/Tract 53653	95	95						
Tract 53419		111						
Downtown Newhall Specific Plan Area		1,092	1,017,000					
North Newhall Specific Plan Area	57	616	660,500				261,000	
Golden Valley Ranch/Tract 52414	498		618,800				261,000	
Bridgeport Market Place			130,000	30,000				5
The Keystone	319	180					274,000	4
Soledad Circle Estates	147							
Soledad Village		407	8,000					
Town Center Mall Expansion			331,860					
The Masters College Expansion		54					213,288	
Materials Recovery/Transfer Facility					160,000			
Mike Redmond's Office Park				51,300				
Jim Backer's Mixed Use Project		10		37,000				
Proposed Project ^a						327,363		
TOTAL	6,744	15,870	6,455,160	1,928,209	10,401,179	327,363	2,224,288	65
Consumption Factor ^a	6,665.0	4,011.5	2.9	2.0	2.41611	4.800	2.0	N/A
Monthly Natural Gas Consumption (cf)	44,948,760	63,662,505	18,719,964	3,856,418	25,130,393	1,571,342	4,448,576	N/A

Total Monthly Natural Gas Consumption (kcf)	162,338
Total Annual Natural Gas Consumption (bcf)	1.95

Notes:

SFR = Single-Family Residential MFR = Multi-Family Residential MOB = Medical Office Building d.u. = dwelling unit s.f. = square foot cf = cubic feet kcf = thousand cubic feet bcf = billion cubic feet
1,000 cf = 1 kcf 1 million kcf = 1 bcf

- a) The consumption factor for industrial uses is cubic feet per gas meter per month. This analysis assumes 100,000 square feet of industrial space per meter.
- b) No factor exists for hospital uses. In order to provide a conservative analysis, the Hotel/Motel consumption factor was applied.
- c) No factor exists for school uses. In order to provide a conservative analysis, the office factor was applied.
- d) The proposed Project includes the new construction of 125,363 square feet (s.f.) of Hospital Uses and 200,000 s.f. of MOB, and the demolition of 8,000 s.f. of MOB. As such, the total net new square footage for MOB and Hospital Uses is 327,363 square feet (i.e. 125,363 s.f. Hospital Uses + 200,000 s.f. MOB - 8,000 s.f. MOB).
- e) Consumption factors are in cubic feet per month and are from the South Coast Air Quality Management District's *CEQA Air Quality Handbook* (1993), Table A9-12-A.