



Appendix E-1:

Socioeconomic Build-Out Assumptions and Methodology



APPENDIX E-1: SOCIOECONOMIC BUILD-OUT ASSUMPTIONS AND METHODOLOGY

The following document provides a description of the assumptions and methods used to determine population, housing, and employment projections for the Riverside County General Plan Land Uses. Appendix E-1 factors, assumptions and methods were used in preparing the updated General Plan and associated analyses.

Assumptions & Methodology

The projections developed represent a range of estimates for potential population, dwelling units, and employment for the unincorporated areas of Riverside County. The General Plan land uses serve as the basis for these projections. A key assumption in understanding the magnitude of these projections is that the projections reflect a theoretical build-out of all unincorporated areas, rather than what is likely to appear on the ground over the next 20 years.

Land use designations differ among jurisdictions for a variety of reasons including unique physical and geographic characteristics, market forces, and varying community desires. There are no industry standards for population density or building intensity that can be applied to the new land use designations created for the Riverside County General Plan. ULI Handbooks, SCAG data, General Plans of cities within Riverside County and contemporary planning experience have been used to define the factors below to estimate Riverside County's future socioeconomic environment.

I. Residential: Population, Dwelling Units & Potential Workers

Gross Acres: Land use designation acreages were derived from GIS-based calculations for each of the Area Plans and the remaining unincorporated areas.

DU/AC (dwelling units per acre): A range of dwelling units per acre are identified for residential land use designations as well as for other designations that allow for limited residential uses (i.e., Rural Mountainous). As indicated in Table E-1, below, the range includes a minimum and maximum density for each designation as well as a midpoint. These ranges have been established based on actual product types and account for roads, rights-of ways, easements and public facilities typically found in residential areas such as elementary schools, parks, etc.

Table E-1: Residential Housing Density Ranges

Land Use Designation	DU/AC		
	Minimum	Midpoint*	Maximum
Agriculture (AG)	0	0.05	0.1
Rural Residential (RR)	0.1	0.15	0.2
Rural Mountainous (RM)	0	0.05	0.1
Rural Desert (RD)	0	0.05	0.1
Open Space – Rural (OS-RUR)	0	0.025	0.05
Estate Density (EDR) (RC and CD)	0.2	0.35	0.5
Very Low Density (VLDR) (RC and CD)	0.5	0.75	1.0
Low Density (LDR) (RC and CD)	1.0	1.5	2.0
Medium Density (MDR)	2.0	3.5	5.0
Medium High Density (MHDR)	5.0	6.5	8.0
High Density (HDR)	8.0	11.0	14.0
Very High Density (VHDR)	14.0	17.0	20.0
Highest Density (HHDR)	20.0	30.0	40.0

*Factor used for theoretical build-out calculations.



Dwelling Units (DU): Dwelling unit projections are estimated by multiplying the number of gross acres by the DU/AC factor ranges for each land use designation. For example, 400 acres of Medium Density Residential with a density range of 2, 3.5, and 5 DU/AC would result in a range of 800; 1,400; and 2,000 DUs respectively.

Average Household Size: To reflect the variations of household size between different regions of Riverside County, separate average household size figures were used to determine population on an Area Plan level basis. Table E-2 outlines average person per household by area plans, which was derived from 2005 average household size in the unincorporated Riverside County.

Table E-2: Average Household Size by Area Plan

Area Plan	Average Household Size
Desert Center	3.61
East County - Desert Area	3.23
Eastern Coachella Valley	4.92
Eastvale	3.69
Elsinore	3.18
Harvest Valley / Winchester	2.91
Highgrove	3.21
Jurupa	3.68
Lake Mathews / Woodcrest	3.34
Lakeview / Nuevo	3.21
March	1.96
Mead Valley	3.79
Palo Verde Valley	3.00
Reche Canyon / Badlands	3.03
REMAP	2.74
San Jacinto Valley	2.82
Southwest Area	3.17
Sun City / Menifee Valley	2.51
Temescal Canyon	3.60
The Pass	2.88
Western Coachella Valley	2.56

Population: Population is determined by multiplying the projected number of dwelling units by the average persons per household factor of each Area Plans. The result was then multiplied by 0.95 to reflect a true and healthy community vacancy rate of 5%. For example, 1,000 dwelling units with in Desert Center Area Plan (DCAP) would have an average persons per household size of 3.61, with a healthy community vacancy rate of 5% applied, it would yield 3,460 residents.

II. Non-Residential: Building Square Footage & Employment

Employment generation for Commercial, Industrial and Business Park land uses were calculated using the following method:

Net Parcel Acres: To determine the actual amount of land available for development, gross acres must be converted to net acres, as shown in Table E-3. For Commercial, Heavy Industrial and Business Park land uses, 25% of the gross area is assumed to be reserved for roads, right-of-ways, easements, etc. Since the Light Industrial designation allows uses that typically require less land for roads, right-of-ways, easements, etc. (i.e., warehouses), a separate gross to net acre factor of 20% is assumed. The remaining 75% (80% for light industrial) of the area is the net acreage. For example, 200 gross acres of Commercial Retail is equal to 150 net acres. 200 gross acres of Light Industrial is equal to 160 net acres.



Table E-3: Net Parcel Acre Factors

Land Use Designation	Net Parcel Area
Commercial Retail (CR)	0.75
Commercial Tourist (CT)	0.75
Commercial Office (CO)	0.75
Light Industrial (LI)	0.80
Heavy Industrial (HI)	0.75
Business Park (BP)	0.75

Net Parcel Square Feet: To convert net acres to net square feet, net acres are multiplied by 43,560 feet per acre. For example, 50 net acres of Commercial Office (66.66 gross acres) equals 2,178,000 net square feet.

Floor Area Ratio (FAR): Floor Area Ratio, or FAR, indicates the ratio of gross building square footage permitted on a parcel to net square footage of the parcel. FAR's for Commercial, Industrial and Business Park land uses are identified, in Table E-4, below. See General Plan Glossary for full definition of FAR.

Table E-4: Development FAR Factors

Land Use Designation	FAR		
	Minimum	Probable*	Maximum
Commercial Retail (CR)	0.20	0.23	0.35
Commercial Tourist (CT)	0.20	0.25	0.35
Commercial Office (CO)	0.25	0.35	1.00
Light Industrial (LI)	0.25	0.38	0.60
Heavy Industrial (HI)	0.15	0.40	0.50
Business Park (BP)	0.25	0.30	0.60

*Factor used for theoretical planning estimates.

Building Square Footage: Building square footage for the land use designations listed in the table above are calculated by multiplying the Net Square Feet of each land use designation by the corresponding FAR. For instance, 20,000 square feet of Commercial Retail with an FAR of 0.23 would yield 4,600 square feet of building space.

Square Feet (SF)/Employee Factor: This factor indicates the number of employees typically associated with a given amount of square feet of building space per employee. It is used to estimate the number of jobs resulting for a given land use designation. These factors for the commercial land use designations are listed in Table E-5 below.

Table E-5: Commercial Employment Factors

Land Use Designation	SF/Employee
Commercial Retail (CR)*	500
Commercial Tourist (CT)	500
Commercial Office (CO)	300
Light Industrial (LI)	1,030
Heavy Industrial (HI)	1,500
Business Park (BP)	600

*It is assumed that CR designated lands will build out at 40% CR and 60% MDR.

Employment: Employment for commercial, industrial, and business park land uses is calculated by dividing the total number of building square feet by the SF/Employee factor. For example, 300,000 square feet of commercial office building space would yield 1,000 employees.



Employment generation for Agriculture, Open Space Mineral Resources, and Open Space Recreation land uses were calculated by multiplying gross acreages by assumed employee per acre factors. Employee per acre factors for these designations were determined using the following methods:

Agriculture: The employee per acre figure, 0.05, was calculated by dividing the total number of farm workers in Riverside County in 1998¹ by the total number of agriculture acres in 1998.²

Open Space - Mineral Resources: The employee per acre figure, 0.03, was calculated by dividing the total number of mining workers in Riverside County in 2000³ by the total number of Mineral Extraction acres in 2000.⁴

Open Space - Recreation: The employee per acre figure, 0.15, accounts for a variety of recreational uses such as golf courses, greenways, and parks and is based on employment figures for existing facilities.

Public Facilities: The employee per acre factor, 1.0, accounts for a variety of public facilities such as airports, schools, landfills, hospitals, etc. This factor is based on employment figures for existing facilities in the unincorporated portion of the county.

Jobs-to-Workers Ratio

The jobs-to-workers ratio is an indicator of the potential employment opportunities for the local labor supply. The ratio is calculated simply by dividing the number of jobs yielded by the employment-generating land use designations by the number of potential workers generated by the residential land use designations.

Jobs-to-Housing Ratio

The jobs-to-housing ratio identifies potential imbalances between housing and employment opportunities. The ratio of jobs to housing is estimated by dividing the total number of projected jobs by the total number of projected dwelling units.

III. Special Land Use Assumptions Community Centers, Community Center Overlay, and Rural Village Overlay

Unlike the land use designations discussed thus far, the Community Center, Community Center Overlay, Rural Village Overlay designations, and other overlays and policy areas allow and encourage multiple uses. As such, these designations require unique methodologies for determining population, dwelling unit and employment projections.

A. Community Centers

Community Center Types: Every Community Center identified in the General Plan is one of four types: Village, Town, Job or Entertainment. Each type has a unique mix of residential and employment uses. Table E-6, below, provides a typical land use breakdown for each type. The actual proportions of land uses per Community

¹ Source: Stanley R. Hoffman Associates

² Source: County of Riverside, Office of the Agricultural Commissioner

³ Source: Stanley R. Hoffman Associates

⁴ Source: The Numbers Document, RCIP GIS Team, May 2, 2000

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Center type may vary. The following are general guidelines intended to indicate the anticipated mix of uses and to provide a means for calculating estimated build-out projections. The actual land use breakdown will be determined on a case by case basis and may differ from the guidelines below.

Table E-6: Community Center Planning Assumptions

Land Use	Community Center Type				
	Village (VC)	Town (TC)	Job (JC)	Job Center with No Residential (JCNR)	
Residential	Highest Density		5%	5%	
	Very High Density	10%	10%	5%	
	High Density	20%			
	Medium High Density	20%			
	Residential Subtotal	50%	15%	10%	0%
Employment	Commercial Retail	30%	40%	15%	15%
	Commercial Office	10%	40%	10%	10%
	Commercial Tourist				
	Light Industrial			30%	30%
	Business Park			30%	30%
	Employment Subtotal	40%	80%	85%	85%
Other	Public Facility (Civic) and/or Open Space	10%	5%	5%	15%
	Acreage Total	100%	100%	100%	100%

Table E-7: Community Centers Identified in the General Plan

Community Center Land Use Designation	
Area Plan - Community	Community Center Type for Land Use Assumption
Eastern Coachella Valley- Mecca	Village Center (VC)
Lakeview/Nuevo- Nuevo (Ramona Expressway)	Village Center (VC)
Lakeview/Nuevo- Nuevo (Nuevo Road)	Village Center (VC)
Temescal Canyon- Glen Ivy Hot Springs	Job Center (No Residential)(JCNR)*

Acreages: Once the Community Center type is established, the number of acres of each land use can be calculated by multiplying the percentage of each land use designation by the total number of acres for the Community Center. For example, a 50-acre Village Center would assume 10% (5 acres) Very High Density Residential, 20% (10 acres) High Density Residential, 20% (10 acres) Medium High Density Residential, 30% (15 acres) Commercial Retail, 10% (5 acres) Commercial Office, and 10% (5 acres) other. Once calculated, these values are incorporated into the applicable General Plan land use planning tables, such as Table 4 for each area plan.

Community Center: Residential

After acreages are determined, dwelling unit (DU) and population figures are calculated using the previous methodology for each residential designation. A 100-acre Town Center, for instance, would include 10% (10 acres) of Very High Density Residential and 5% (5 acres) Highest Density Residential. Using the previous methodology, the 100-acre Town Center would yield 170 Very High Density DUs (10 ac x 17 DU/AC = 170 DUs) and 150 Highest Density (5 ac x 30 DU/AC = 150 DUs) DUs, for a total of 320 DUs. Using an average persons per household factor of 3.01, the Village Center would yield 963 residents (320 DUs x 3.01 persons per household = 963).

Community Center: Employment

For employment generating land uses in community centers, the number of jobs is calculated using the same method as described before: (Net Acres x 43,560 x FAR)/(SF per employee). Due to the concentrated nature of



Community Centers and due to the varying mix of employment generating land uses within each Community Center type, the building intensity, or FAR, for each land use is typically greater in Community Centers than in areas designated for single uses and varies among the types. The square footage per employee factor remains the same as the single use land use designations. These factors are described as follows:

Table E-8: Community Center Land Use Factors

Community Center Type	FAR			SF/Emp.
	Minimum	Probable*	Maximum	
Village Center (VC)				
Commercial Retail	0.20	0.30	0.50	500
Commercial Office	0.25	0.50	1.00	300
Town Center (TC)				
Commercial Retail	0.20	1.00	1.50	500
Commercial Office	0.25	1.50	3.00	300
Job Center (JC)/Job Center No Residential (JCNR)				
Commercial Retail	0.20	0.40	0.50	500
Commercial Office	0.25	1.00	2.00	300
Light Industrial	0.25	0.38	0.60	1,030
Business Park	0.25	0.30	0.60	600

*Factors used for planning estimates.

For example, in a 100-acre Village Center, 30 acres (30%) would be designated as Commercial Retail and 10 acres (10%) as Commercial Office. Gross acres would be converted to net acres (30 x .75 = 22.5 net acres and 10 X 0.75 = 7.5 net acres). Next, to calculate net square footage, FARs would be applied to the net square feet (22.5 net acres x 43,560 sf X .30 = 294,030 net sf and 7.5 net acres x 43,560 sf X .50 = 163,350 net sf, or a total of 457,380 net sf). To calculate estimated employment, net square footage is divided by the SF per employee factor for each land use (294,030 net sf ÷ 500 = 588 employees and 163,350 net sf ÷ 300 = 546 employees, for a total estimated employment of 1,134).

Mixed Use Planning Areas

The Mixed-Use Planning Area land use designation is intended to reflect a mixture of higher intensity land uses generally appropriate for core urban or other specialized areas. The intent of the designation is not to identify a particular mixture of intensity of land uses, but to designate areas where a mixture of residential, commercial, office, entertainment, educational, and/or recreational uses, or other uses is planned. Many of the Mixed-Use Planning Areas are located in specific plans. The following are general guidelines intended to indicate the anticipated mix of uses and to provide a means for calculating estimated build-out projections. The actual land use breakdown will be determined on a case by case basis and may differ from the guidelines below.

Table E-9: Mixed Use Planning Area Assumptions

Area Plan	MHDR	HDR	VHDR	HHDR	CR	CT	CO	PF	MDR
San Jacinto Valley			10%	5%	40%		40%	5%	
Southwest			10%	5%	40%		40%	5%	
Harvest Valley/ Winchester	20%	20%	10%		30%		10%	10%	
Western Coachella Valley					20%	80%			
Lakeview / Nuevo	11%	22%	32%		14%			21%	



B. Land Use Overlays

Community Center Overlays

The Community Center overlay provides an option for development at the densities and intensities permitted by the underlying land use or at the densities and intensities permitted by the Community Center designation. While these areas may ultimately build out at the underlying land use densities, projections for these areas reflect the more intense uses allowed within Community Center to avoid underestimating the numbers of residents and employees that could occur. Build-out estimates for Community Center Overlays will be calculated using the same method as Community Centers.

Table E-10: Community Center Overlays in the General Plan

Community Center Overlay	
Area Plan – Community	Community Center Type for Land Use Assumption
Eastvale- Mira Loma	Job Center (JC)
Eastvale- Eastvale (Archibald Avenue)	Village Center (VC)
Eastern Coachella Valley	Village Center (VC)
Harvest Valley/Winchester- Winchester	Town Center (TC)
Harvest Valley/Winchester- French Valley	Village Center (VC)
Jurupa- Mira Loma	Village Center (VC)
Jurupa- Rubidoux	Village Center (VC)
Southwest- French Valley	Village Center (VC)
Mead Valley – I215	Job Center (JC)
The Pass- Cabazon	Underlying Land Use

Rural Village Land Use Overlays (RVLUO) and Rural Village Overlays (RVO)

The Rural Village Land Use Overlay and Rural Village Overlays allows a concentration of residential and commercial uses over and above what is permitted by the underlying land use designation. While these areas may ultimately build out at the underlying land use densities, socio-economic build out for these areas reflect the more intense uses allowed within Rural Villages to avoid underestimating the numbers of residents and employees that could occur within the Rural Village.

Table E-11: Rural Village Factors and Planning Assumptions

RURAL VILLAGE OVERLAY	
Area Plan - Community	Land Use Assumption
Western Coachella Valley – Sky Valley	EDR-RC and CR (5 acres only)
RURAL VILLAGE LAND USE OVERLAY	
Area Plans - Community	Land Use Assumption
Elsinore – Meadowbrook	Alternate Land Use (See Figure ELAP-5)
Mead Valley – Good Hope	Alternate Land Use (See Figure MVAP-5)

*EDR-RC: 2.5 AC Minimum (0.3 DU/AC = Midpoint)

For example, a 50-acre Rural Residential parcel with a Rural Village Overlay would be comprised of 25 acres of Medium and Medium High Density Residential and 25 acres of Commercial Retail. For residential uses, the 50-acre parcel would yield a range of 50, 125, and 200 DUs (25 ac x 2 du/ac, 25 ac x 5 du/ac, and 25 ac x 8 du/ac) and a population range of 150, 376, and 602 (50 du x 3.01, 125 du x 3.01, 200 du x 3.01). Employment would be calculated by multiplying the number of acres by the gross to net factor (25 x .75 = 18.75 net acres) then converted to net square feet (18.75 x 43,560 = 816,750), then multiplied by the FAR range (0.20, 0.23, and 0.35) then divided by the Square Footage per Employee factor (500) for a range of 327, 376, and 572 employees.



Community Development Overlay

The Community Development Overlay is a tool that allows Community Development land use designations to be applied through General Plan Amendments in the future within specified areas lying within Rural, Rural Community, Agriculture, or Open Space Foundation Component areas, while maintaining the underlying land use designations of these other foundation components until such time as the Community Development land uses are approved. The following are general guidelines intended to indicate the anticipated mix of uses in each one of the community development overlay and to provide a means for calculating estimated build-out projections. The actual land use breakdown will be determined on a case by case basis and may differ from the guidelines below.

Table E-12: Community Development Overlay Assumptions

AREA PLAN/ Community	VLDR	LD R	MDR	MHDR	HDR	VHDR	HHDR	CR	CT	LI	HI	BP	MDR*	OS-R
Jurupa														
Sunny slope	15%	15%	16%					4%	1%	45%	1%	3%		
Belltown								100%						
Southwest														
Winchester				15%	25%	20%	15%	25%						
Lakeview/Nuevo														
Lakeview	15%	15%	16%					4%	1%	45%	1%	3%		
The Pass														
Banning	15%	15%	16%	30%	5%	1%	1%	4%	3%	6%	1%	3%		
Eastern Coachella Valley														
East Jackson				100%										
Lemon					100%									
Middleton				100%										
Blossom	5%	5%	5%	32%	9%	3%	1%	6%	7%	24%	1%	2%		
70th	5%	5%	5%	32%	9%	3%	1%	6%	7%	24%	1%	2%		
64th				92%			4%							4%
W. Monroe				100%										
66th					25%		25%	25%		25%				
Mecca	5%	5%	5%	32%	9%	3%	1%	6%	7%	24%	1%	2%		
Vista Santa Rosa(VSR)	5%	5%	5%	45%				6%	7%	24%	1%	2%		
55th - VSR													50%	50%
66th - VSR				100%										
Desert Center														
Desert Center	5%	5%	5%	32%	9%	3%	1%	6%	7%	24%	1%	2%		

* MDR: DU: Min. 1.0, Max. 3.0, Mid. 2.0

Specific Community Development Designation Overlays

To provide for local flexibility, the County of Riverside may choose to designate properties within any foundation component with a specific community development designation overlay. The application of a Specific Community Development Designation Overlay to properties within any foundation component other than the Community Development foundation component may only occur in conjunction with the initial adoption of the General Plan and with the eight year cycles. In situations where the underlying designation is within a different foundation component, the specific community development designation overlay provides an exemption from the 8-year limit placed on Foundation Component General Plan Amendments, but only for the General Plan Amendment to the specific designation of the overlay. Otherwise, in situations where a Specific Community



Development Designation Overlay (other than a Community Center Overlay) is applied over a different Community Development designation, a review of the applicable Area Plan text is required. The following are general guidelines intended to provide a means for calculating estimated build-out projections.

Table E-13: Specific Planning Assumptions

BUSINESS PARK OVERLAY	
Area Plan- Community	Land Use Assumption
Jurupa - Mira Loma	Business Park
Jurupa - Glen Avon	Business Park
Lakeview/Nuevo	Business Park
COMMERCIAL RETAIL OVERLAY	
Area Plan- Community	Land Use Assumption
Jurupa - Mira Loma	Commercial Retail

Policy Areas

Not all areas within an area plan are the same. Distinctiveness is a primary means of avoiding the uniformity that so often plagues conventional suburban development. A Policy Area is a portion of an Area Plan that contains special or unique characteristics that merit detailed attention and focused policies. The location and boundaries of the Policy Areas designated in each area plan are shown in the respective Area Plan figure denoting Overlays and Policy Areas. The Airport Influence Areas are captured in the respective Area Plan figure denoting the Airport Influence Policy Area. Each Policy Area is described in detail within the corresponding Area Plan text. For Policy Areas, the underlying land use designations are intended to be used for calculating estimated build-out projections, unless otherwise specified in the following guidelines. The actual land use breakdown will be determined on a case by case basis and may differ from the guidelines below. In certain cases, when there is an overlap between an overlay and policy area, overlay takes precedence over policy area.

Table E-14: Policy Area Planning Assumptions

Policy Name	Area Plan	Land Use Assumption
Glen Eden	Elsinore	LDR ¹
Highway 79	Southwest; Sun City/ Menifee Valley; Harvest Valley/ Winchester; San Jacinto Valley	Use underlying Land Use plus modifications as per General Plan
Section 25 & 36	Southwest	EDR
Juniper Flats	Lakeview/ Nuevo	EDR-RC
El Sobrante	Lake Mathews/Woodcrest	MDR ²
2-4 DU/AC	Lakeview/Nuevo	MDR ³
Banning Bench	The Pass	VLDR ⁴
Cherry Valley	The Pass	VLDR ¹ , except the overlapping part of Cherry Valley Gateway and 0.5 mile buffer from the San Bernardino County line.
Desert Center	Desert Center	BP
Walker Canyon	Elsinore	1/3 OS-RUR and 2/3 OS-CH
Keller Road South Side	Southwest	LDR
Vista Santa Rosa	Eastern Coachella Valley	25% MDR, 25% MHDR and 50% CR
Wiley's Well Road	Palo Verde Valley	Use Underlying Land Use and spare 5 acres for CR
Chiriaco Summit Planned Community	Eastern Coachella Valley	25% MDR, 25% MHDR and 50% CR

Footnotes:

1. LDR assumptions for this policy area: Minimum DU = 2.0, Midpoint DU = 2.5, Maximum DU = 3.0.
2. MDR assumptions for this policy area: Minimum DU = 2.0, Midpoint DU = 2.5, Maximum DU = 3.0.
3. MDR assumptions for this policy area: Minimum DU = 2.0, Midpoint DU = 3.0, Maximum DU = 4.0.
4. VLDR assumptions for this policy area: Midpoint DU = 1.0.



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