
POTENTIAL DEVELOPMENT CAPACITY AND EXPECTED NEEDS

The existing land use analysis demonstrates that approximately 28% (43,125 acres) of the developable land within the extraterritorial zone remains vacant or undeveloped. If that land were to develop at applied densities and land uses according to the land use plan, how much future development would be generated within those undeveloped areas (capacity)? How would the projected total development compare with expected growth projections (needs)? In addition to potential development capacity, what major projects have been approved or pending and how do their cumulative totals compare to expected needs?

These issues are addressed through a comparison of development capacity and expected needs. This also includes development build out scenarios, potential future water demand associated with both projected growth, possible land consumption and build out based on land use that can be calculated. The following sections provide these comparisons.

Section 5.1 Development Capacity based on Vacant Lands

Vacant lands within the EZ possess some future development capacity based on the future land uses assigned to vacant lands. Build out potential of those areas can be estimated based on the expected level of intensity of the future development. Because this plan is regional in scale, levels of intensity can be very broad-ranged; therefore, it is necessary to assume three scenarios of build out potential for each land use category.

Estimated vacant acreage according to future land use designations is shown in Chart and Table 5.1.A. Non-residential land uses (upper half of table) include three levels of development intensity—low, moderate and high floor area ratio coverages (FAR). Traditionally, FARs for non-residential within the city range from .10 to .25 depending on the use and distance to the urban core. Overall, Santa Fe has relatively low floor area ratios due to lower building heights and an ample supply of land. The FARs outside of the city tend to be considerably lower. Examples of this occur in several major employment centers and institutions such as the Santa Fe Community College, the NM State Penitentiary and the Turquoise Trail Business Park. In keeping with this pattern, the projected FARs used to calculate development intensity within the EZ are relatively lower than the city average.

Estimated residential (lower half of table) is also estimated at three levels of intensity. These include similar densities to current development trends (low), moderate densities and urban densities similar to in-city development patterns. The actual residential density that could be achieved will depend on both the zoning applied and the access to water and wastewater, but in order to estimate development potential, certain reasonable assumptions were applied.

In addition to the non-residential square footages and the number of residential units at build out, potential added water demand associated with each land use category has also been derived. These totals represent potential water demand generated by land uses. The water demand totals are based on total EZ build out—it is not time specific.

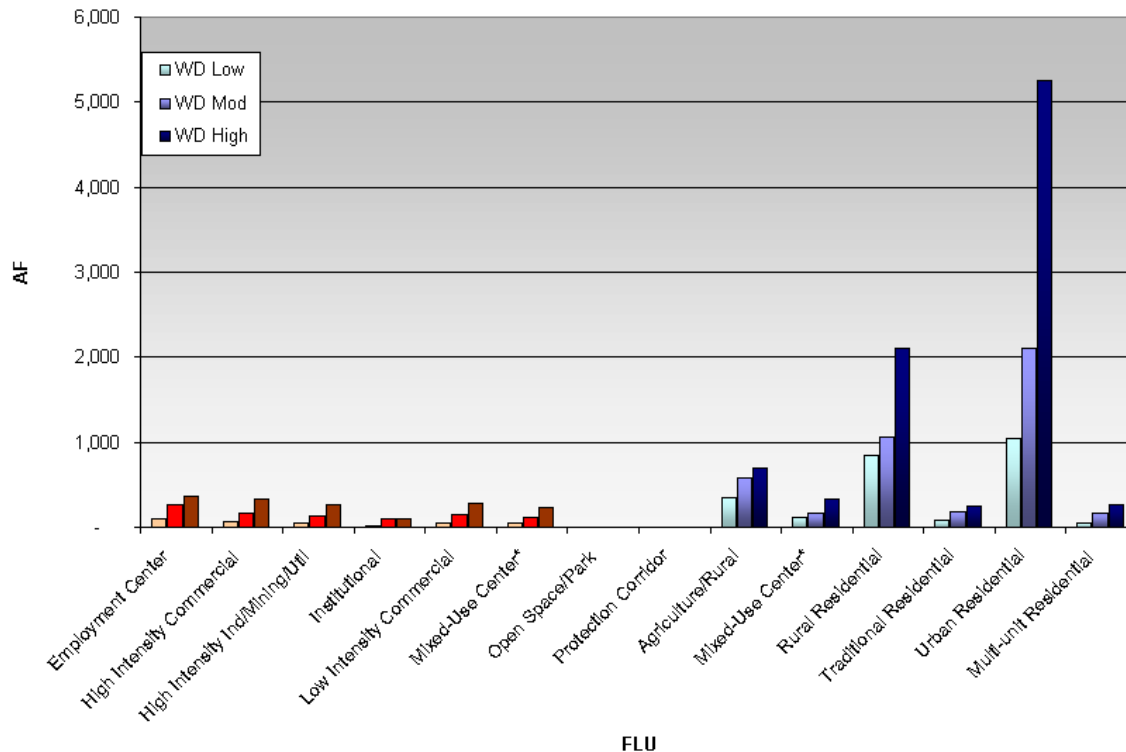
RPA Planning Area Development Capacity and Water Demand for Vacant Lands

Future Land Uses	Tot. Acreage	Low FAR/Density	Avg FAR/Den.	Pot. Units	WD Low	Mod FAR/Density	Avg FAR/Den.	Pot. Units	WD Mod	High FAR/Density	Avg FAR/Den.	Pot. Units	WD High
Employment Center	600	0.02	0.02	522,720	105	0.05	0.04	1,306,800	261	0.07	0.08	1,829,520	366
High Intensity Commercial	375	0.02		326,700	65	0.05		816,750	163	0.10		1,633,500	327
High Intensity Ind/Mining/Util	600	0.01		261,360	52	0.03		653,400	131	0.05		1,306,800	261
Institutional	225	0.01		98,010	20	0.05		490,050	98	0.05		490,050	98
Low Intensity Commercial	325	0.02		283,140	57	0.05		707,850	142	0.10		1,415,700	283
Mixed-Use Center*	520	0.02		226,512	45	0.05		566,280	113	0.10		1,132,560	227
Open Space/Park	49,500	-		-	-	-		-	-	-		-	-
Protection Corridor	3,650	-		-	-	-		-	-	-		-	-
Agriculture/Rural	21,800	20.00		1,090	349	12.00		1,817	581	10.00		2,180	698
Mixed-Use Center*	520	0.50	3.60	520	114	0.33	2.84	788	173	0.17	1.43	1,529	336
Rural Residential	16,850	5.00		3,370	843	4.00		4,213	1,053	2.00		8,425	2,106
Traditional Residential	950	2.50		380	76	1.00		950	190	0.75		1,267	253
Urban Residential	5,250	1.00		5,250	1,050	0.50		10,500	2,100	0.20		26,250	5,250
Multi-unit Residential	225	0.75		300	54	0.25		900	162	0.15		1,499	270
Total Developable LU	47,720												
Total Non-Residential LU	2,385			1,718,442	344			4,541,130	908			7,808,130	1,562
Total Agriculture/Rural	21,800												
Total Residential LU	23,535			9,820	2,137			17,350	3,678			38,970	8,216
Total WD by LU (w/ WD factor)				0.25	2,481			0.26	4,587			0.26	9,778

* Mixed-use Center assumes a 50/50 split between residential and non-residential uses.

Table and Chart 5.1.A. Development Capacity and Potential Water Demand Associated with Future Land Uses (FLU)

Projected Added Water Demand by Future Land Uses



Assuming moderate development intensity, build out occurs at 4.5 million square foot of non-residential and at 17,350 housing units, generating an added water demand of 4,600 acre-feet. High intensity projections nearly double those figures to 7.8 million square feet of commercial and 39,000 units, generating 9,800 acre-feet of water demand. In either example, the prorated water demand factor (water factor applied to housing units that carries a proportionate share for commercial) averages .26 acre-feet per dwelling unit (AF/du). This is slightly below the projected EZ average (see Table 5.1.B) of .29 AF/du. In contrast, the city prorated water demand factor is estimated at .34 AF/du.

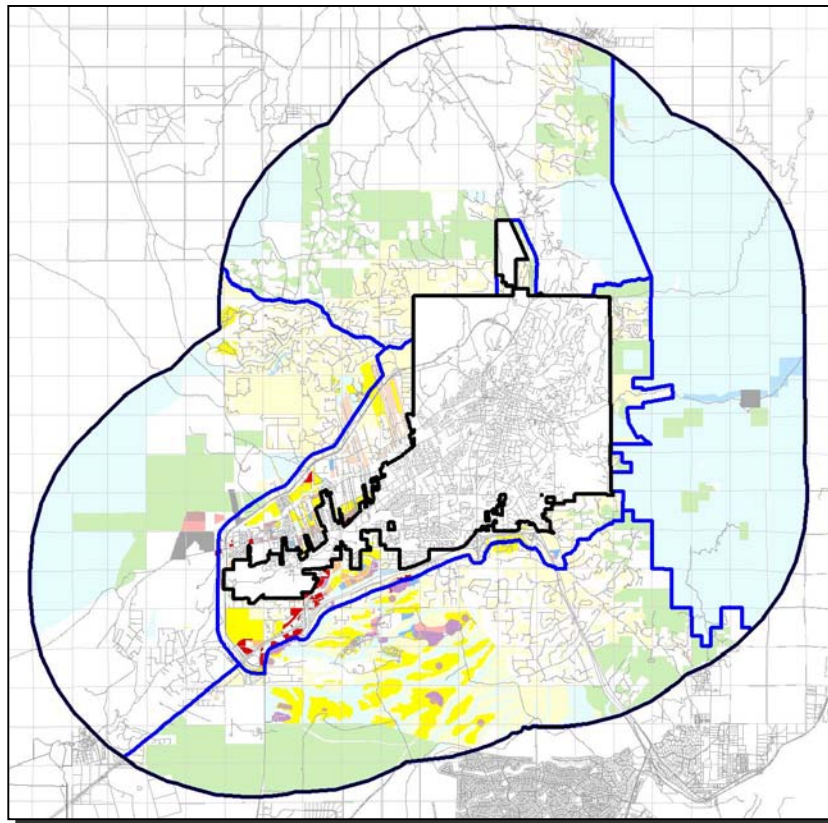


Figure 5.1.A. Vacant Lands by Future Land Use

The variation between in-city and EZ prorated averages is consistent with the higher percentage of commercial to housing percentages within the city than within the EZ. This is similarly reflected in the higher projected (2020) jobs-to-housing ratios within the city (1.4) to EZ ratios (0.8).

Since the majority of vacant lands falls within the south subarea, including the Community College District, the development intensity is likely to occur between moderate and high levels provided the CCD develops at or near urban density of less than one dwelling unit per acre (gross). Most importantly, development intensity will be highly influenced by water availability, so until there is more reliable data regarding potential water supply, assumptions of the projected level of development intensity remain broad.

Section 5.2 Expected Need

The needs assessment is derived according to the projections presented in Chapter 4. Table 5.2.A. shows the projected needs for housing and non-residential square footage to year 2020. Included is associated water demand according to each category.

Demand Type		Subarea		Year						
				2002	2003	2007	2010	2020	2010	2020
Projected Housing and Non-Residential SF with Water Demand (WD)										
Total Housing Units (Most Likely)										
	RPA Urban Area*	37,879	38,349	40,185	41,479	45,338				
	RPA North Area	1,780	1,834	2,056	2,220	2,704				
	RPA West Area	1,966	2,075	2,545	2,926	4,247				
	RPA South Area	2,777	2,955	3,800	4,577	7,601				
Units Added										
	City (Estimated)		400	413	335	328	3,060	6,340		
	RPA Urban Area*		71	73	59	58	540	1,119		
	RPA North Area		54	57	54	48	440	924		
	RPA West Area		109	110	141	132	960	2,281		
	RPA South Area		178	170	327	302	1,800	4,824		
Water Demand										
	City (Estimated)		88	91	74	72	673	1,395		
	RPA Urban Area*		16	16	13	13	119	246		
	RPA North Area		12	13	12	11	97	203		
	RPA West Area		24	24	31	29	211	502		
	RPA South Area		39	37	72	67	396	1,061		
Total Housing Units (excluding city estimated share)			412	410	581	541	3,740	9,148		
Total WD/Year (Res. @ .22af/unit)			91	90	128	119	823	2,013		
Total Non-Residential SF (Most Likely)										
	RPA Urban Area**	24,138	24,425	25,571	26,431	29,495				
	RPA North Area	127	131	147	158	192				
	RPA West Area	357	411	626	787	1,361				
	RPA South Area	1,363	1,501	2,056	2,471	3,954				
SF Added (1000's)										
	City (Estimated)		259	257	258	276	2,063	4,821		
	RPA Urban Area		29	29	29	31	229	536		
	RPA North Area		4	4	3	3	31	65		
	RPA West Area		54	54	54	57	430	1,004		
	RPA South Area		138	140	138	148	1,108	2,591		
Water Demand										
	City (Estimated)		39	39	39	41	309	723		
	RPA Urban Area		4	4	4	5	34	80		
	RPA North Area		1	1	1	1	5	10		
	RPA West Area		8	8	8	9	64	151		
	RPA South Area		21	21	21	22	166	389		
Total Non-Res. SF (excluding city estimated share**)			224	227	224	240	1,797	4,195		
Total WD/Year (Non-Res@ 1.5af/1000sf)			34	34	34	36	270	629		
Total EZ WD Added All Development - Most Likely (.29 af/unit)							1,092	2,642		
Most Likely Growth (Region - .30 af/unit)							0	2,075	4,760	
Slow Growth Scenario (.29 af/unit)							0	1,661	3,598	
Rapid Growth Scenario (.29 af/unit)							0	2,436	5,752	

Projected Residential Need (EZ)

Projected (est.) Non-Residential SF Need (EZ)

Table 5.2.A. Estimated Water Demand for Projected Housing and Non-Residential SF Needs 2020

Using the *most likely* housing and employment projections from Chapter 4, there is a projected need for an additional 9,100 dwelling units and 4.2 million square feet of non-residential¹ within the EZ. This generates an estimated water demand of 2,650 AF by 2020. Regionally, there is a projected need for some 4,800 AF of new water. Assuming a *slow growth* alternative, added regional water demand by 2020 is projected to be approximately 3,600 AF—under a *rapid growth* alternative, added water demand is projected at 5,750 AF.² Chart 5.2.A illustrates the range in projected regional demand.

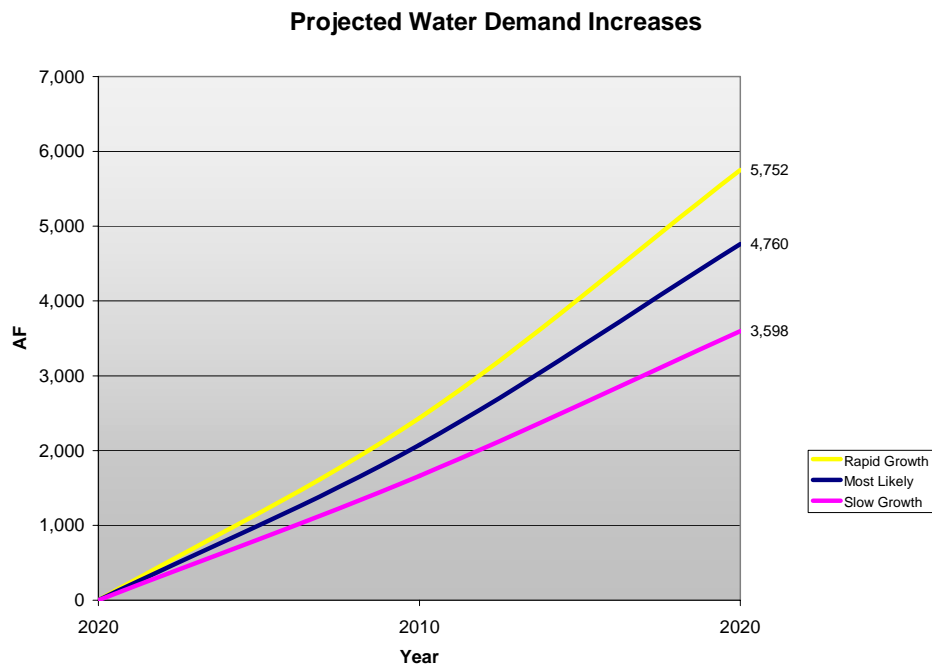


Chart 5.2.A. Projected Regional Water Demand Associated with Housing and Non-Residential SF Needs

Section 5.3 Land Consumption and Development Intensity (Capacity versus Needs)

Land consumption provides a means of measuring urban sprawl. It calculates the percentage of developable land³ that is consumed within a given area at varying levels of density and intensity as a function of some expected need. Table 5.3.A. illustrates the potential amount of lands that would be consumed based on (an average) low, moderate and high development intensity for residential and non-residential lands⁴.

Land Consumption as a Percentage of Capacity vs. Need within the Urbanizing Area*

Future Land Uses	Tot. Acreage	Development Capacity									Projected Need WD 2020
		Low Intensity	Total Acres	% of Land	Mod intensity	Total Acres	% of Land	High Intensity	Total Acres	% of Land	
Total Non-Residential (SF)	2,385	0.02	4,816	202%	0.04	2,408	101%	0.1	1,204	50%	4,195,410
Total Urbanizing Residential (units)	23,535	3.7	33,848	144%	2.9	26,529	113%	1.5	13,722	58%	9,148
Land Consumption (Acres & % of Undeveloped)	25,920		38,663	149%		28,937	112%		14,926	58%	

* Does not include "Rural" lands @ 21800 acres since this is not treated as active developing acreage at urban density

Table 5.3.A. Projected EZ Land Consumption based on Three Development Intensity Scenarios

If the non-rural lands were to develop at low intensity, land consumption would exceed designated lands by 149%. This implies that development would move outside of the urban

delineated areas into rural areas inside and outside of the EZ by 2020. If development were to occur at moderate intensity levels, development capacity would be at or slightly above the total non-rural land use designated acreages. At high intensity levels, only 58% of the total lands would be consumed.

In order to promote compact urban development and minimize sprawl in accordance with regional principles, Table 5.3.A suggests that the most appropriate development intensity levels would occur between moderate and high development intensity levels as defined according to Table 5.1.A. The applied level of development intensity would remain a function of service availability and corresponding land use regulations.

Another method for comparing capacity and expected needs is according to water demand. Assuming again average low, moderate and high development intensities based on calculated acreage for residential and non-residential land use designations, EZ development capacity at build out is estimated. This produces a projected water demand associated with the build out potential. This method is shown in Table 5.3.B.

Assuming a low intensity development build out, some 9,900 dwelling units (DUs) and 1.7 million square feet of commercial are possible. This produces and estimated 2,500 AF of additional water demand. Under moderate intensity levels, build out capacity increases to 17,350 DUs, 4.6 million SF of commercial and a generated water demand of 4,600 AF. Lastly, under high intensity levels, capacity reaches 39,000 DUs and 8 million square feet of commercial with a generated water demand of nearly 9,800 AF. In contrast, expected 2020 needs occur at 9,100 dwelling units and 4.2 million square feet of non-residential. Associated water demand comparisons are shown in Chart 5.3.B.

Future Land Uses	Development Capacity						Projected Need		
	Pot. Units	WD Low	Pot. Units	WD Mod	Pot. Units	WD High	SF/Units 2020	WD 2020	
Total Non-Residential (SF)	2,385	1,718,442	344	4,541,130	908	7,808,130	1,562	4,195,000	629
Total Residential (units)	23,535	9,820	2,137	17,350	3,678	38,970	8,216	9,148	2,013
Total Projected WD		2,481		4,587		9,778			2,642

Table 5.3.B. Projected EZ Build Out Scenarios compared to Expected Capacity

The resulting implications are similar to the land consumption analysis. Build out based on low development intensity falls below projected need. Build out levels that fall between moderate to high development intensity would meet or exceed projected need. Water demand associated with the three build out scenarios and projected need are illustrated in Chart 5.3.B.

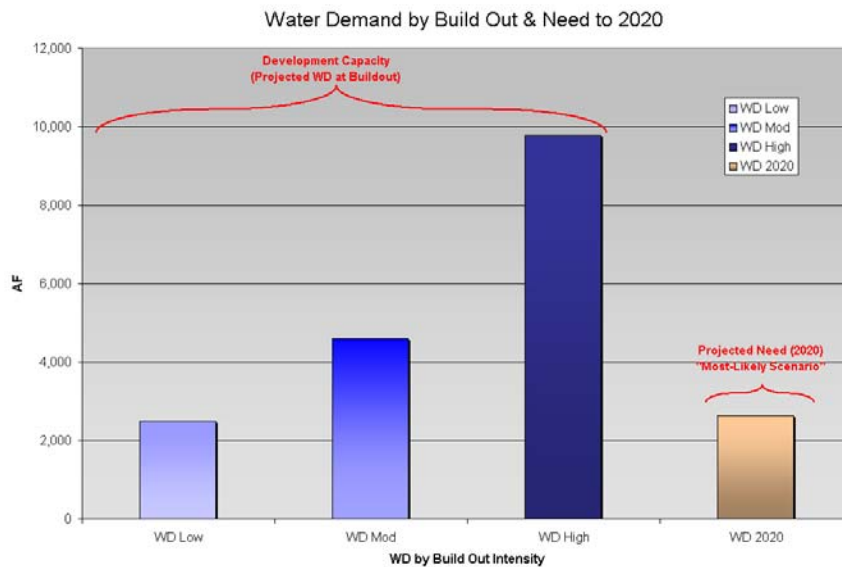


Chart 5.3.B. Projected EZ Water Demand (at Build Out) according to Development Intensity

Section 5.4 Pending Development

The preceding sections used theoretical models to estimate future development potential and levels of intensity. There are also “real world” examples that demonstrate future development potential—these are the pending and approved developments within the EZ. Although these areas are frequently shown in several of the regional maps, they are not necessarily accounted for within the existing conditions data and only conceptually within the future land use data. In order to rectify this, it is appropriate to acknowledge the major pending developments within this chapter. Representation within this plan does not imply any form of development approval nor does it validate any particular project—it is intended to recognize market activity as a component of future development potential.

Major Residential Pending or Approved Development

City Served	Units	Area	County	Units	Area
Aldea	293	W	Kings	25	W
Chaco Hills (Teserra)	88		Oshara	735	S
CC Apts	62	UA	San Cristobal	2,781	S
Mission Viejo	20		Windmill Ridge	597	S
San Clemente	44	UA	Sonterra	520	S
Tesuque Creek (Summit)	15	UA	Gardner (La Pradera)	69	S
Peaks (High Summit)	32	UA	Rancho Oso Loco	53	N
Thornburg	248	S	Peters (Suerte del Sur)	264	N
Tierra Real MHP III	70	UA	Valle Serena	20	S
Grevey Tract*	107	UA			
Village Plaza	86	UA			
Total Units	1,065			5,064	
Total Vacant Platted	3,400				
Pending Development	6,129				
Total Future Residential Units	9,529				
Projected Need (Most Likely)	9,148				
Projected Over-Allocation	(381)				

* Current as of April 2004 (Look back 5 years)

Table 5.4.A. Pending or Approved EZ Residential Development⁵

Commercial Pending					
Area	Name	Land Use	Project Acreage	FAR	Square Foot
South					
	Oshara	Employment Center	471		1,200,000
		Retail			480,000
	San Cristobal	Industrial/Business Park	1818		1,300,000
	Sonterra	Retail	245		20,000
	Taurus	Industrial			
	Thornburg	Employment Center	224		981,000
		Community Center			375,000
		Neigh. Center			89,100
	Rancho Viejo Village Center	Retail	4.6		12,624
Subtotal					4,457,724
Urban*					
	Skywest Live/Work	Live/Work	-	-	56,000
	B & E Development	Retail	-	-	7,000
	Santa Fe New Mexican BP	Commercial	-	-	93,000
	Big O Tire Center	Commercial	-	-	28,500
	Quiggy's & A-1 Transmission	Commercial	-	-	20,400
	Zia Center	Retail/Office	-	-	24,100
	Praise Tabernacle	Institution	9.2	0.1	40,075
	San Felipe Commercial Ctr	Retail	2.7	0.15	17,642
	Territorial Plaza	Retail	10.4	0.15	67,954
	Santo Nino de Felipe	Retail	8.4	0.15	54,886
	Village Plaza	Retail	27.7	0.15	180,992
	Aqua Fria Art Space	Live/Work	21.8	0.05	47,480
	KSK Buddhist Expansion	Institution	1.8	0.1	7,841
	Youth Shelter	Institution	0.4	0.15	2,614
	County Senior Services	Institution	6	0.15	39,204
	Johnson Tract	Retail/Office	4.6	0.1	20,038
	Capitol Ford	Retail	4.7	0.15	30,710
	Christian Academy	Institution	26	0.15	169,884
	Santa Fe Center	Retail*	297	0.05	646,866
	Komis Center (est.)	Commercial	-	-	50,000
	SW Business Center (Hu-wa-ka)	Business Park	-	-	52,000
	American Home Furnishings	Retail	15	0.2	150,000
Subtotal					1,807,184
West					
	Aldea Village Center	Community Commercial			123,000
	Aldea Village Center	Institution			217,800
	Aldea Village Center	Live/Work			14,600
	Airport Industrial Park	Industrial/Warehouse	75	0.1	326,700
	Race Track	Recreation/Hotel*			100,000
Subtotal					782,100
Total Pending Commercial					7,047,008
Projected Need Non-Residential (Most Likely)					4,195,000
Projected Over-Allocation					(2,852,008)

* Denotes estimate according to FAR applicable to non-city development

Tables 5.4.A. Pending and Approved EZ Non-Residential Development

Table 5.4.A. presents major pending residential developments⁶ that have been submitted, reviewed, or approved. Table 5.4.B. includes estimated non-residential development submittals or approvals. Both tables compare projected need with total pending development as a broad indication of deficiency or over-allocation. These estimations, however, do not reflect potential needs according to different market segments, for example, affordable housing versus estate residential, therefore, these tables are not intended to replace detailed needs assessments for various market segments as a measure of deficiency.

The tables provide generalized summaries of the residential and non-residential pending

developments within the EZ. With respect to residential, the number of housing units approved (including the remaining vacant lots) exceeds 2020 projected need by approximately 380 units. Similarly, pending or approved commercial exceeds expected need by 2.85 million square feet. The total over-allocation of development translates to a potential 400 AF of additional water demand above what is projected according to need. It also assumes no additional development approvals to 2020.

Section 5.4 Summary of Findings

This chapter provides comparisons between development capacity and expected need using future land uses and projected growth. It models land consumption percentages, build out scenarios and potential water demands according to varying levels of development intensity ranges within the different land use categories. It also provides a comparison of pending and approved development to expected need.

The modeling results produce the following findings;

- *Low intensity development.* When low density and intensity land uses are modeled, it produces very high land consumption rates. By 2020, the amount designated for urban development (non-rural lands) exceeds the amount of land available by 149%. This implies that all lands within the EZ will be developed or developing by 2020 and that growth would be pushed outside of the five-mile extraterritorial zone. In contrast, projected utility water demand for the EZ would theoretically be lower due to lower densities. Development capacity generally falls below expected need, however, there may not be future available land (within the EZ) to continue to accommodate future needs beyond the 2020 planning time frame.
- *Moderate intensity development.* When moderate density and intensity land uses are modeled, it produces average land consumption rates. By 2020, the amount of designated non-rural land is expected to absorb nearly all of the projected growth. This implies that growth to 2020 would not have to significantly draw on rural reserves in order to meet expected needs.
- *High intensity development.* Under this modeling scenario, land consumption for non-rural lands uses about half of the designated lands in accordance with expected growth. Water utility demand levels are relatively high to accommodate the level of development intensity.

Under these three scenarios, compact urban form is best achieved under high intensity uses; however, the corresponding utility water demand requirements may also be high in order to accommodate that level of growth. This applies to water demand for utility services—it assumes that urban densities require centralized utility in order to achieve greater density. In contrast, moderate use intensity meets expected needs and produces moderate levels of water demand. This is based on the assumption that there are trade-offs between centralized utility service and well/septic systems depending on the level of density. While low intensity uses produces lower water demand levels for utility service, it also promotes urban sprawl and very high land consumption

rates. So, while compact urban forms reduce land consumption, there is an increased demand for centralized utility and related water rights. Alternatively, low density encourages sprawl, increases the reliance on well and septic, and may avert water right requirements. If a regional goal were to balance these issues, then low-density development/urban sprawl would not be considered an appropriate alternative.

With respect to pending development, the amount of residential and non-residential units pending generally exceeds expected needs to year 2020. This implies some level of development speculation within the market system, particularly for non-residential uses. If submittals continue at a similar pace as is demonstrated by these tables, the degree of land speculation may be expected to similarly rise, since supply is already estimated to outstrip demand (as a function of need) according to what is currently approved. This is particularly relevant to the non-residential pending development.

¹ Projected non-residential floor area in Chapter 4 is 4.0 million square feet as compared to the 4.195 million estimated here. This represents a 5% margin of error whereby estimated need is slightly overstated as compared to projected need.

² Water demand assumptions include the following: 1) Non-residential water demand factor applied at an average 1.5AF per 10,000 SF of floor area and 2) residential water demand factor applied at .22 AF per dwelling unit. Although it is recognized that demand can be driven downward through conservation measures, these figures represent water usage under normal conditions.

³ Developable lands in this example apply to land uses classified as urbanizing or urban. It does not include lands classified as rural. This includes the 21,800 acres of agriculture or rural. Although these lands are developable, they are not assumed to be developable at urban density and are treated as future development reserve for purposes of modeling development capacity.

⁴ Average non-residential FARs and residential densities reflect the weighted averages derived from the Development Capacity 5.1.A.

⁵ There are at least three additional approved subdivisions that are less than 24 lots that are not included within the total pending residential development.

⁶ There is currently no development tracking system within the County so these are estimated projects according to review of past agendas (approximately five-years). This table was prepared in mid-2003, updated according to most recent project, but it may not reflect all development approvals or submittals. Some of these projects may be under construction at the time of this report, however, they would not have been included within the existing land use analysis.