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PLANNING ASSISTANCE

FOR

RIVERSIDE COMMUNITY COLLEGE DISTRICT

SCAN OF CONDITIONS EXTERNAL TO RCCD

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July 2007

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INTRODUCTION

This is one of several papers from a project designed to help Riverside Community College District (RCCD conduct its long-range strategic planning.

Work on this project began in the January 2007, and has included, among other activities:

- Project design by the contractor (Chuck McIntyre), reviewed by RCCD staff
- Extensive meetings with RCCD staff on project intent, methods, and findings
- Focus groups with individuals from communities in the RCCD service area
- Focus groups with students and staff from RCCD colleges
- Information and data gathering and analysis by the contractor from a variety of sources in- and outside RCCD
- Extensive review of proposed findings, implications and strategies with staff

From this work, project papers written by the contractor for RCCD include:

- *External Scan*: of external conditions and the educational needs of RCCD 's students and communities
- *Internal Scan:* of conditions internal to RCCD; how well it is meeting the educational needs
- *Scenarios and Simulations*: of the enrollment implications of future scenarios

Riverside Community College District (RCCD) is one of 72 public community colleges districts throughout California. Located in the northwest portion of Riverside County in the "Inland Empire," east of the Los Angeles metropolitan area, RCCD campuses are located in the cities of Riverside, Moreno Valley and Norco, and supplemented by several other delivery locations in the area (Chart A). Classes began at the Riverside City campus in 1916, and the two new campuses were established in 1991.

This comprehensive system, delivering less-than-baccalaureate transfer, occupational and community education, currently enrolls over 30,000 students that are highly diverse, requiring education that ranges all the way from pre-collegiate basic skills classes to English as a second language (ESL) to lower division general education to highly-skilled job retraining. RCCD's mission statement also includes a role for the college in the economic development of the Inland Empire.

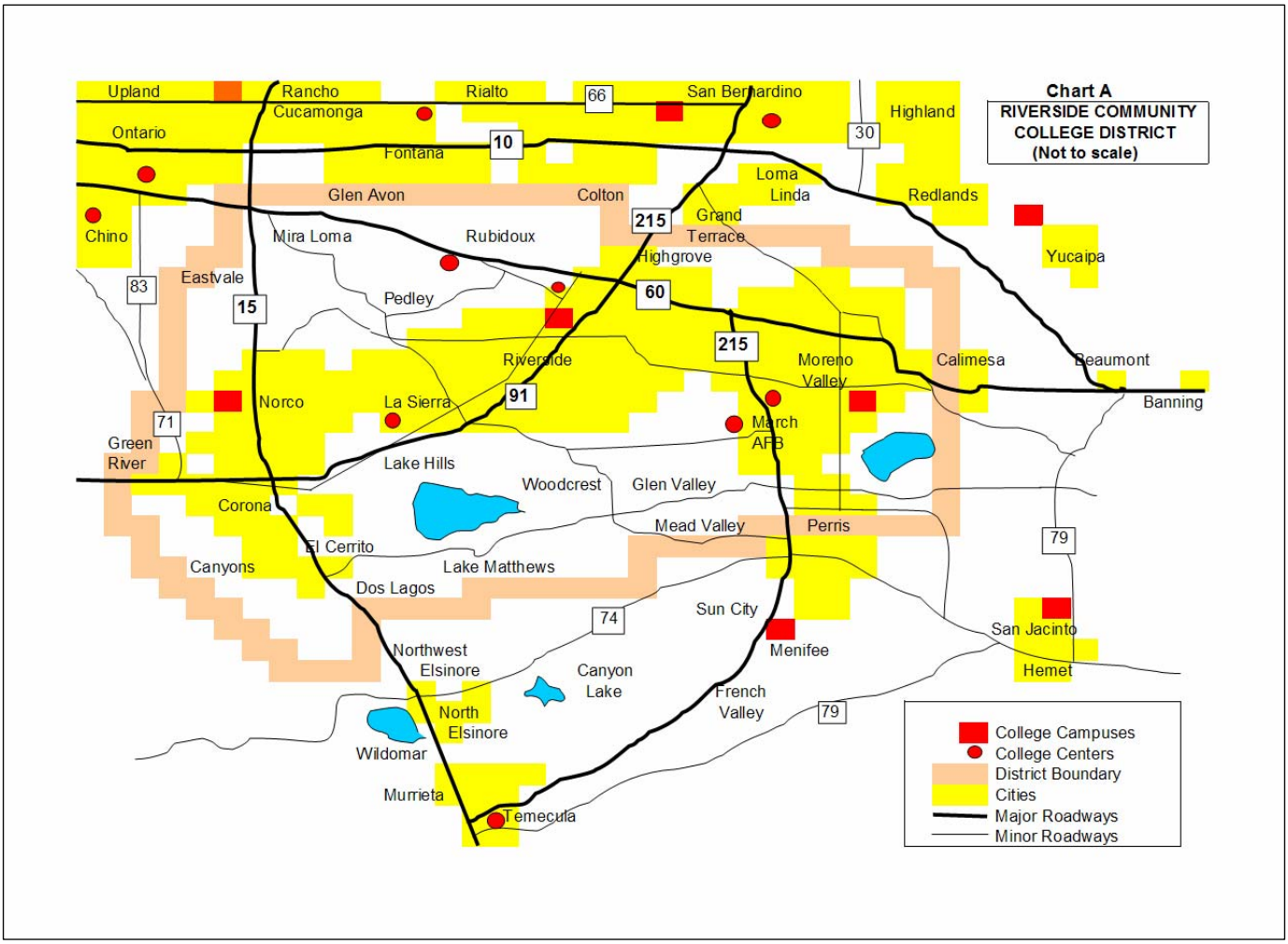


Chart A
RIVERSIDE COMMUNITY COLLEGE DISTRICT
(Not to scale)
Upland
Rancho Cucamonga
Rialto
San Bernardino
Highland
Ontario
Fontana
Loma Linda
Redlands
Glen Avon
Colton
Grand Terrace
Chino
Mira Loma
Rubidoux
Highgrove
Yucaipa
Eastvale
Pedley
Riverside
Moreno Valley
Calimesa
Beaumont
Norco
La Sierra
Banning
March AFB
Green River
Lake Hills
Woodcrest
Glen Valley
Corona
Mead Valley
Perris
El Cerrito
Canyons
Lake Matthews
Dos Lagos
Sun City
San Jacinto
Northwest Elsinore
Menifee
Canyon Lake
Hemet
French Valley
North Elsinore
Wildomar
Murrieta
Temecula
College Campuses
College Centers
District Boundary
Cities
Major Roadways
Minor Roadways

At present, RCCD awards degrees and certificates in a variety of programs offered at or through:

- its main campus in downtown Riverside
- the two smaller, but comprehensive, campuses at Moreno Valley and Norco
- distance learning over the Internet – RCCD's Open Campus
- contract training for local workers and businesses (some at worksites)
- community education classes and workshops (many at the Magnolia Center)
- specific training at the March Education and Ben Clark Training Centers
- Culinary Academy and Rubidoux Education Annex

is developing programs at the

- La Sierra Center in education
- School for the Arts in downtown Riverside

And is considering continuing education and other programs in

- South Corona

Three other community college districts are adjacent to RCCD's district area: Chaffey to the west, San Bernardino to the north, and Mt. San Jacinto to the southeast (see again Chart A). Typically, RCCD enrolls students from all three districts – especially along its northern border – and there is considerable commuting of students among RCCD's three campuses across the service area.

RCCD colleges are major transfer feeders to California State University San Bernardino, University of California Riverside, Loma Linda, Redlands, La Sierra, and other four-year institutions. The usual "virtual" opportunities – University of Phoenix and others – are present, and a number of "competitor" proprietary schools preparing students for the workforce are located locally in the Inland Empire.

Serving an area that continues to experience substantial population growth – and will for at least another ten to fifteen years – RCCD programs and enrollments will continue to grow despite the recent downturn in enrollment. And with this expected long-term growth, there are important specific questions:

- How will California's Inland Empire evolve and, as a consequence, how should RCCD evolve?
- How much will (should) the newer campuses (to be colleges) at Norco and Moreno Valley, and other possible new centers grow, in relation to the main Riverside campus, and among what kinds of students?
- How should the curriculum evolve, and how much of it ought to be delivered through partnerships and by distance learning?
- How can RCCD maintain a robust lower division, general education transfer core, while augmenting its workforce preparation and contract training? In what

specific skill areas ought the latter functions be expanded so as to meet the labor market needs of the Inland Empire and other areas for which RCCD trains?
- How do competitors – and potential partners – fit into RCCD plans?
- To what degree should the college make its market penetration (access) "more consistent" across its different service area communities and increase overall area access to higher levels? What strategies are appropriate for dealing with RCCD's out-of-district students?
- What kinds of enrollment management strategies will enable RCCD to fulfill its mission, and meet its goals and objectives?

The purpose of this ***external scan*** is to help address the above questions by describing the environment external to RCCD, and covers events, trends and likely futures relevant to RCCD planning – mostly, but not entirely, within the district's service area, the northwest Riverside County and Inland Empire – for the following categories:

- Demographics
- Culture and Infrastructure
- Technology
- Economics and Jobs
- Public Policy
- Educational Policy, Practice, and Trends

DEMOGRAPHICS

Estimated population trends in RCCD's several part service area provide RCCD with a picture of its *potential* student enrollment - markets or niches. The *actual* future enrollment of those students depends on RCCD policies and strategies.

Work below on RCCD's service area demographics relies on estimates and projections by the U.S. Census Bureau, California State Department of Finance (DOF), Southern California Area Governments (SCAG), Western Riverside Council of Governments (WRCOG), Riverside County, GeoLytics, and Claritas, along with plausible extrapolations by the author of this paper.

Robust Area Growth

The Inland Empire and Riverside County are among the fastest growing areas in America. (The Inland Empire includes Riverside and San Bernardino counties and is roughly bordered by the San Bernardino Mountains to the northeast, San Jacintos to the southeast, Chino Hills to the west, and the Santa Ana Mountains to the southwest.)

Riverside and San Bernardino counties have grown at annual rates of 4.1% and 2.6%, respectively, since 2000 (Chart B) – rates that far exceed those of neighboring Los Angeles County (1.3%), Orange County (1.4%) and California generally (1.5%).

From about 3.2 million in 2000, the Inland Empire is expected to grow to 5 million by 2020, up 1.7 million, exceeding the total growth of 47 of the 50 states.

Apart from its far more rapid pace, the Inland Empire's population change is quite different than elsewhere in California (see again Chart B). Half or more of San Bernardino and Riverside County population growth is characterized by domestic immigration; that is, individuals moving in from other parts of California and other states – accounting for fully seven of every 10 net new residents in Riverside County, many coming from Los Angeles and Orange Counties. By contrast, the latter two counties and California in general are losing residents to other areas and states, their growth coming entirely from natural increase (births less deaths) and foreign immigration.

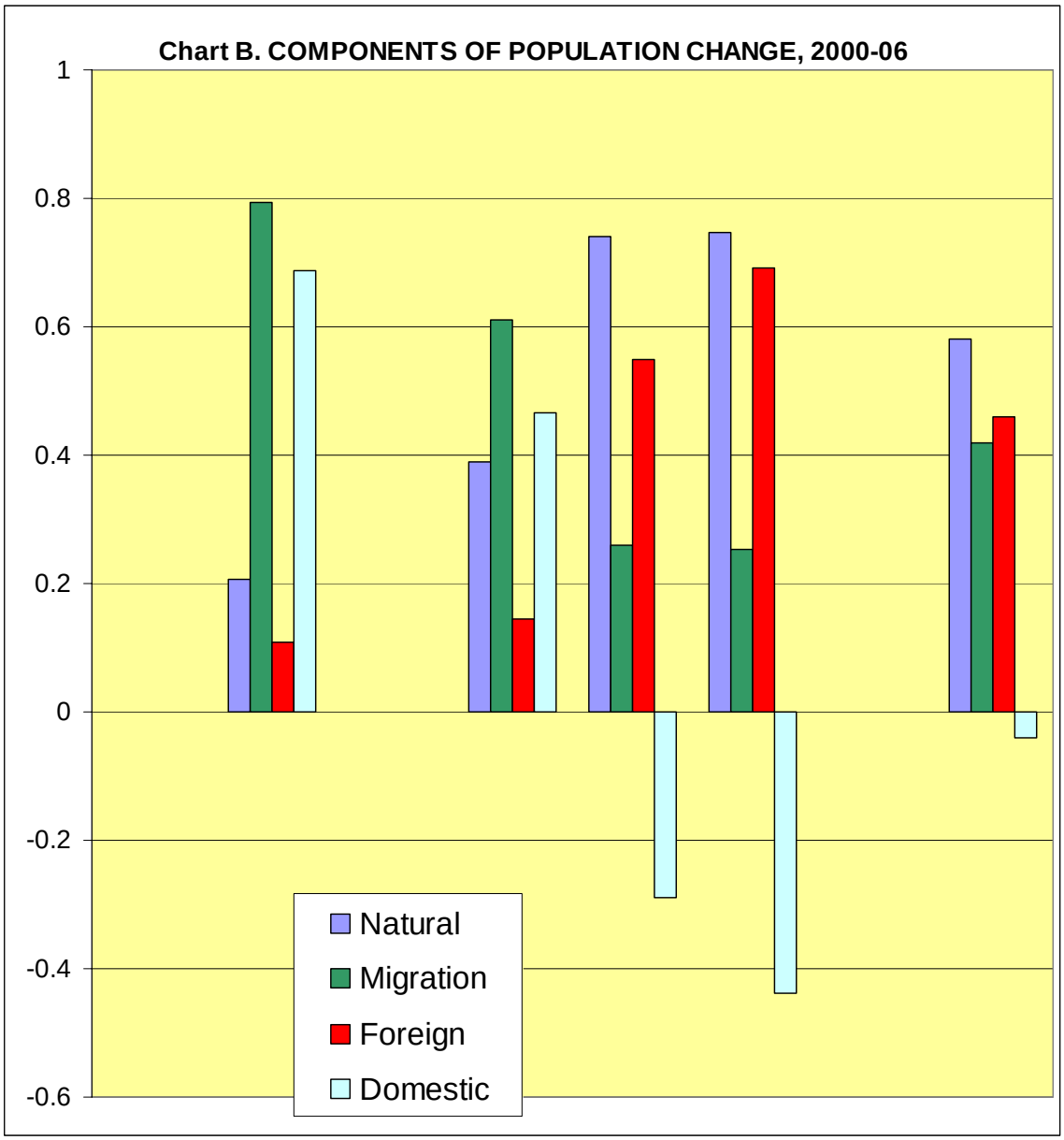
These patterns are due of course to the Inland Empire's cost of land and labor: while naturally rising, it is still below that of areas to the west and the coast, thereby supporting residential, industrial, followed by high-end housing and office development, and as a result the substantial and unique net positive domestic migration.

Turning to the more specific areas served by RCCD colleges and centers – its district and adjacent areas – we find similarly rapid growth rates. Working from data on the ZIP Code areas and communities within RCCD's district boundaries, we note that the area's population has nearly doubled in size over the past 15 years, from 590,000 in 1990 to over 1 million in 2005 (Chart C). During that time, the largest growth was in the unincorporated areas, Corona and the City of Riverside.

During the next 15 years, according to WRCOG, while area growth will still be substantial, there will be a slowing of the rate, from over 4% (over the past 15 years) to a 15-year average of around 2% annually. Most growth is expected in Moreno Valley, the City of Riverside (again), and in Perris (see again Chart C). Surprisingly, growth in Corona is expected to slow dramatically.

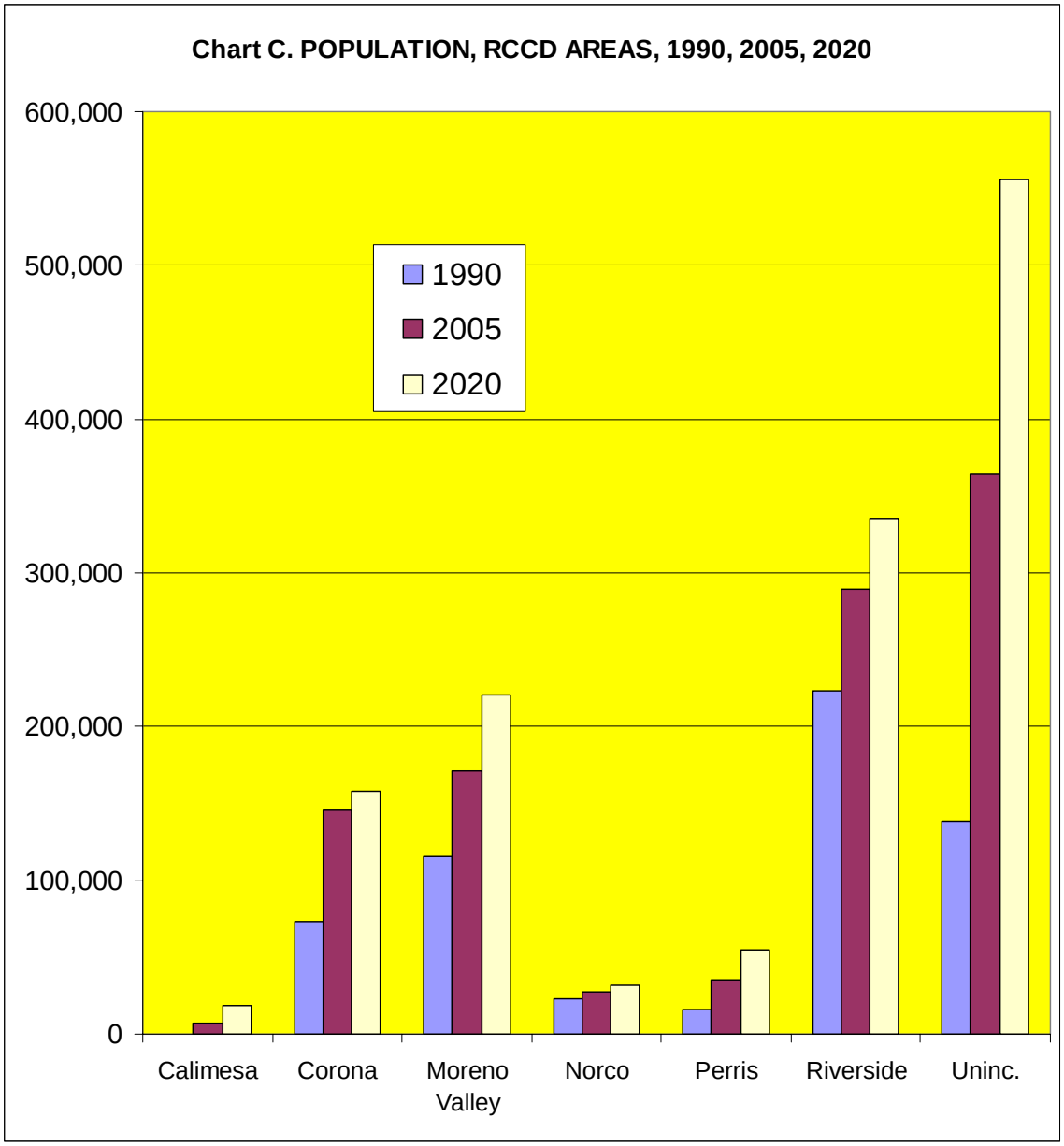
It should be noted that these forecasts may be conservative. For example, Geolytics, Inc. (2007) forecasts a growth rate of 6% annually between 2006 and 2011 for the RCCD area after estimating a 5% annual growth rate between 2000 and 2006 (the latter consistent with WCROG and DOF estimates).

This growth rate could be spurred by those communities with substantial potential for development that lie south of the SR91 and east of the I15, an area traversed by Cajalco Road – Lake Hills, Woodcrest, Lake Matthews, Mead Valley, and Glen Valley – all the way to Perris, the latter growing 5% in 2006, and partly outside RCCD's district boundary (Chart A). Development of these areas and their potential impact on future RCCD enrollments will depend to a large degree on an adequate infrastructure of energy, water and transportation; i.e., improvement of the Cajalco.



	ANNUAL GROWTH 2000-06	PROPORTIONS OF CHANGE COMPONENTS, 2000-06			
		Natural Increase	*Migration Total*	*Foreign Immigration*	*Domestic Immigration*
Riverside County	4.1%	21%	79%	11%	69%
San Bernardino	2.6%	39%	61%	15%	46%
Orange	1.4%	74%	26%	55%	-29%
Los Angeles	1.3%	75%	25%	69%	-44%
California (non RivCo)	1.5%	58%	42%	46%	-4%

Source: CA DOF (2007).



	LAST 15 YEARS				NEXT 15 YEARS		
City/Area	***1990***	***Change***	***%Chg***	***2005***	***Change***	***%Chg***	***2020***
Calimesa	0	7,490		7,490	10,777	144%	18,267
Corona	73,300	72,328	99%	145,628	11,928	8%	157,556
Moreno Valley	115,500	55,917	48%	171,417	48,973	29%	220,390
Norco	23,100	4,165	18%	27,265	4,787	18%	32,052
Perris	16,260	18,989	117%	35,249	19,203	54%	54,452
Riverside	223,300	65,677	29%	288,977	46,491	16%	335,468
Uninc.	138,618	225,455	163%	364,073	191,661	53%	555,734
TOTAL RCCD	590,078	450,021	76%	1,040,099	333,820	32%	1,373,919

Source: WRCOG (2007), Geolytics (2007), McIntyre (2007).

Also relevant for RCCD planning is the rapidly-growing I-15 corridor south of Corona, including El Cerrito, Dos Lagos and, further to the south: Lake Elsinore (7% growth in 2006), Murrietta (8%), and Temecula (15%) – the latter three communities outside RCCD's district boundary, but contributing students (mostly to Norco) nonetheless.

On RCCD's west side are the communities of Calimesa, Beaumont and Banning, and the San Gregorio Pass area (see again Chart A). The latter is located outside RCCD's boundary, but students from this area have a choice of attending Moreno Valley, Grafton Hills (both of which are of roughly equal distance), or College of the Desert (a longer commute to the east in Palm Desert). This Pass area is growing and will continue to grow more rapidly than the rest of the Inland Empire largely because its housing is still less expensive than the more mature areas of the region. The numeric population change expected here is not trivial:

	Area Population			
	2005	***2020***	***Change***	***% Chg.***
Banning	28,283	47,684	19,401	69%
Beaumont	21,242	52,591	31,349	148%
Calimesa	7,490	18,267	10,777	144%
Total	57,015	118,542	61,527	108%

The growth in Banning and Beaumont together over the next 15 years is expected to exceed that of any of RCCD's currently incorporated cities – the Pass area to double in size much like its neighboring cities to the west did during the past 15 years. This is all the more important because RCCD's market penetration in this area was found by McIntyre (2002) to have increased markedly between 1990 and 2000.

To the north, along RCCD's border are the communities of Redlands, Grand Terrace, Loma Linda, Bloomington, Highgrove, Rubidoux, Pedley and Glen Avon – some within RCCD's boundaries, some just outside in the San Bernardino district – all of which will continue to grow and all known to send significant numbers of students to RCCD.

The extent of RCCD enrollment that comes from outside its district boundaries – around one-third of total enrollment in most years – makes these peripheral areas more important in planning and enrollment management than they might be otherwise. The presence and impact of adjacent colleges in these areas is discussed below.

A Diverse Service Area

As different as the RCCD service area growth and population characteristics are from those elsewhere, the area's demographics themselves vary substantially from community to community. Dividing the RCCD service area into nine major ZIP Code clusters, it is possible to examine each of the more commonly-known communities for their substantial demographic differences based on 2006 estimates from census data by Geolytics, Inc. (Chart D).

Chart D
DEMOGRAPHICS OF RCCD COMMUNITIES, 2006

	92324 Colton		***92320 Calimesa***		***92518 March AFB***		***92879-83 Corona***		***91752 Mira Loma***		***92551-57 Moreno Valley***		***92860 Norco***		***92570-71 Perris***		***92501-09 Riverside***	
Popn	67,081		8,146		983		202,065		26,272		186,567		29,996		82,868		481,400	
HH	20,820		3,239		484		60,955		8,181		52,677		7,654		22,780		152,541	
AveHH	3.2		2.5		2.0		3.3		3.2		3.5		3.9		3.6		3.2	
Males	33,170	49%	3,931	48%	458	47%	100,503	50%	13,194	50%	91,439	49%	16,742	56%	41,303	50%	239,888	50%
Females	33,911	51%	4,216	52%	525	53%	101,562	50%	13,077	50%	95,128	51%	13,254	44%	41,564	50%	241,513	50%
White	52,744	79%	7,655	94%	796	81%	163,528	81%	23,963	91%	125,148	67%	26,733	89%	63,867	77%	390,835	81%
Black	7,271	11%	48	1%	118	12%	12,525	6%	762	3%	37,501	20%	1,864	6%	12,543	15%	35,256	7%
NatAm	1,069	2%	71	1%	11	1%	2,133	1%	389	1%	2,026	1%	252	1%	1,402	2%	6,161	1%
Asian	4,390	7%	146	2%	28	3%	17,748	9%	452	2%	14,175	8%	535	2%	2,629	3%	34,071	7%
PacIsl	258	0%	24	0%	4	0%	1,070	1%	127	0%	1,517	1%	70	0%	386	0%	2,885	1%
2+	1,350	2%	202	2%	25	3%	5,063	3%	579	2%	6,203	3%	540	2%	2,041	2%	12,188	3%
Hisp.	43,661	65%	1,572	19%	176	18%	81750	40%	13,025	50%	81,621	44%	7,804	26%	48,241	58%	211,485	44%
NonH	23,420	35%	6,574	81%	807	82%	120,315	60%	13247	50%	104946	56%	22192	74%	34627	42%	269,915	56%
<15	18,368	27%	1,505	18%	159	16%	52,881	26%	6,118	23%	48,813	26%	5,261	18%	22,917	28%	116,974	24%
15-24	11,341	17%	1,143	14%	105	11%	31213	15%	4,380	17%	34,687	19%	3,878	13%	14,724	18%	80,362	17%
25-54	27,822	41%	2,989	37%	244	25%	88004	44%	10,204	39%	75,591	41%	14,832	49%	32,172	39%	200,765	42%
55+	9,550	14%	2,509	31%	475	48%	29967	15%	5,570	21%	27,476	15%	6,025	20%	13,055	16%	83,299	17%
15+	48,713		6,641		824		149,184		20,154		137,754		24,735		59,951		364,426	
Med I $	39,257		40,082		67,828		67,433		33,108		52,101		60,055		34,511		47,724	

Source: RCCD IR (2007), GeoLytics (2007), McIntyre (2007).

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Chart E
DEMOGRAPHICS OF RCCD 1990, 2000, 2006, 2011

	1990	%	*2000*	%	*Change 1990-2000*	*%Chg*	*2006*	%	*Change 2000-2006*	*%Chg*	*2011*	%	*Change 2006-2011*	*%Chg*
Popn	590,078		813,702		223,624	38%	1,085,378		271,676	33%	1,417,371		331,993	31%
HH	188,613		243,300		54,687	29%	329,331		86,031	35%	429,501		100,170	30%
AveHH	3.13		3.34		0.22	7%	3.3		-0.05	-1%	3.30		0.00	0%
							0							
Males	293,675	50%	403,742	50%	110,067	37%	540,632	50%	136,890	34%	707,150	50%	166,518	31%
Females	296,399	50%	409,960	50%	113,561	38%	544,754	50%	134,794	33%	710,218	50%	165,464	30%
							0							
White	424,198	72%	464,393	57%	40,195	9%	855,276	79%	390,883	84%	1,089,528		234,252	27%
Black	38,793	7%	77,931	10%	39,138	101%	107,889	10%	29,958	38%	137,648		29,759	28%
NatAm	4,822	1%	8,323	1%	3,501	73%	13,514	1%	5,191	62%	16,994		3,480	26%
Asian	48,436	8%	39,802	5%	-8,634	-18%	74,174	7%	34,372	86%	123,817		49,643	67%
Pac Isl			2,417	0%	2,417		6,341	1%	3,924	162%	9,614		3,273	52%
2+			44,213	5%	44,213		28,191	3%	-16,022	-36%	39,766		11,575	41%
Other	73,824	13%	176,623	22%	102,799	139%								
Hisp.	139,819	24%	328,380	40%	188,561	135%	489,338	45%	160,958	49%	683,805	48%	194,467	40%
NonH	450,259	76%	485,322	60%	35,063	8%	596,040	55%	110,718	23%	733,566	52%	137,526	23%
<15	156,378	27%	225,833	28%	69,455	44%	272,990	25%	47,157	21%	342,552	24%	69,562	25%
15-24	89,269	15%	126,896	16%	37,627	42%	181,834	17%	54,938	43%	231,007	16%	49,173	27%
25-54	261,761	44%	349,085	43%	87,324	33%	452,626	42%	103,541	30%	574,538	41%	121,912	27%
55+	82,670	14%	111,888	14%	29,218	35%	177,928	16%	66,040	59%	269,274	19%	91,346	51%
15+	433,700		587,869		154,169	36%	812,388		224,519	38%	1,074,819		262,431	32%
MdHH$	40,628		47,078		6,451	16%	48,982		1,904	4%	48,884		-98	0%

GeoLytics (2007).

Perris, Mira Loma, and Colton report the largest proportions of Hispanic and young persons, with the lowest incomes. March Air Force Base (AFB) and Norco are just the opposite on these metrics. Norco, surprisingly, reports the largest household size (nearly four), followed by Perris at 3.6 and Moreno Valley at 3.5. Corona has the highest proportions of working adults (age 15-54) and the highest median household income, at a reported $67,000 in 2006, about $20,000 or 50% higher than individuals in the City of Riverside.

Area demographics have changed dramatically since 1990 (Chart E). For example, the Hispanic population has increased from one in every four residents in 1990 to 45% in 2006 and is forecast (by Geolytics, Inc.) to comprise 48%, nearly half, by 2011. The area's Asian population has also grown rapidly, and at one in every ten residents by 2011 is expected to nearly equal the area's Black population.

Growth in area median household incomes was fairly robust during the 1990s at 16%. Since 2000, however, there has been relatively little change in this measure, less than 1% per year, which if accurate is substantially less than the rate of inflation.

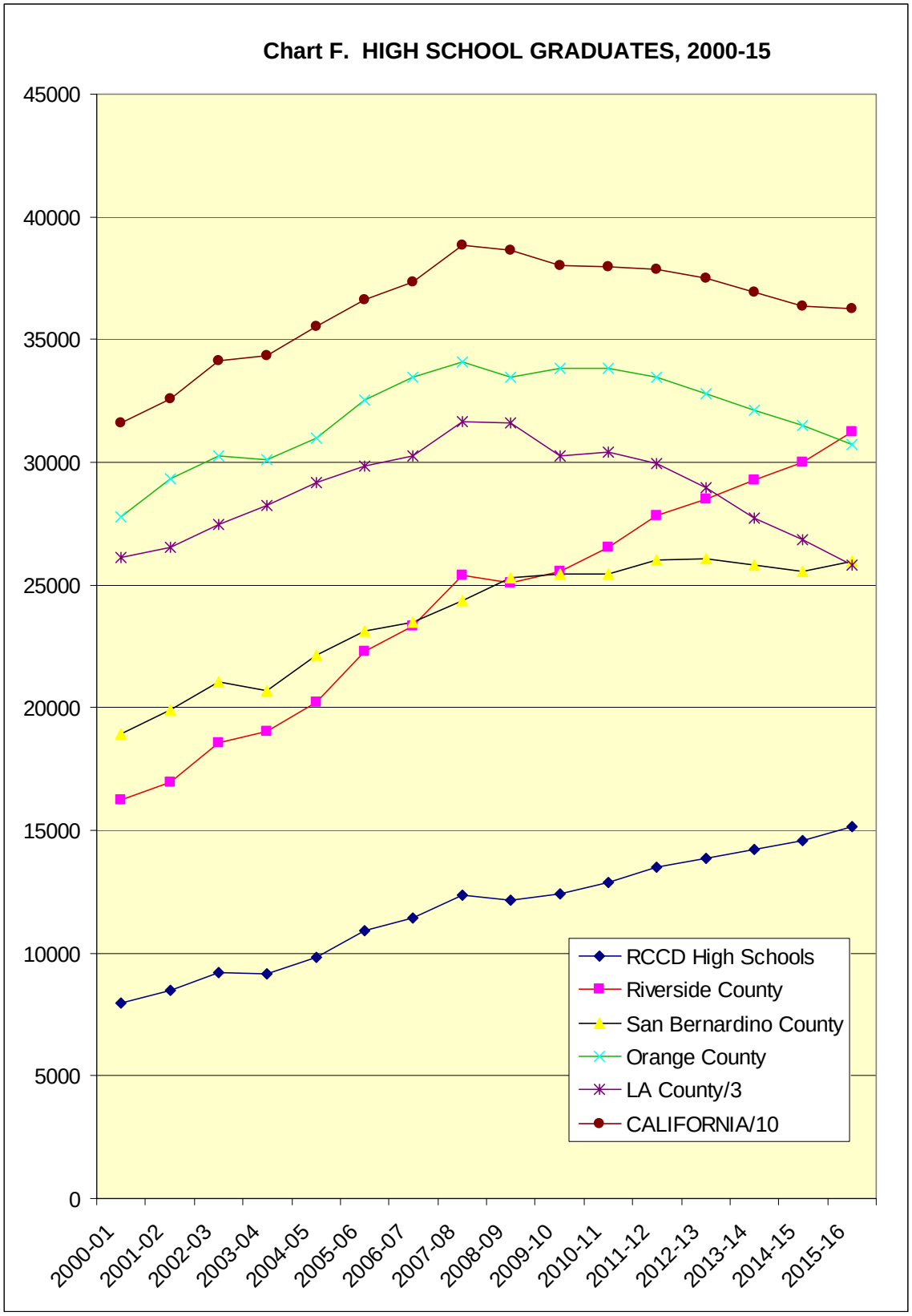
Like other parts of California, the area 55+ year-old population has begun and will continue to increase – at about twice the rate of all other area population cohorts. Until recently, however, the character of area growth has led to a relatively young population, with the 15-24 year-old cohort increasing at an estimated annual average rate of:

4% between 1990 and 2000
7% between 2000 and 2006
5% between 2006 and 2011

High School Graduates

The impact of the above area demographics on RCCD's feeder high schools has put the district into a rather unique position. Numbers of graduates from most high schools in California and in many other parts of the nation are expected to increase until 2008 after which time they will either stabilize or decline, sometimes substantially, depending on the area. By contrast, Riverside County high schools, including those feeding RCCD, will continue their growth in graduates beyond 2008, at least through 2015-16, according to estimates by the California State Departments of Finance and Education (Chart F).

While the State of California generally, and Los Angeles and Orange Counties will specifically experience declining numbers of high school graduates after 2008, San Bernardino County graduates will stabilize, and Riverside County graduates will continue their rapid growth, consistent with the area's 15-24 age cohort. These estimates suggest that RCCD feeder high schools will increase from their current level of 11,000 annually to 15,000 by 2015-16, thereby sustaining robust transfer programs at each of RCCD's three colleges. Improvement in the college-going rate of area high school graduates will reinforce this potential (see also papers on *Internal Scan* and *Scenarios and Simulations*).



Source: RCCD IR (2007), CA SDE (2007), McIntyre (2007).

CULTURE AND INFRASTRUCTURE

Significant changes in values, lifestyles, family formation, language, and other factors affecting the quality of life – transportation time, air and water quality, energy, child care and the like – can be expected as RCCD 's service area region grows rapidly and as local communities become far more multi-cultural.

RCCD 's service area, a portion of the "Inland Empire – northwest Riverside County, eastern Los Angeles County and southeast San Bernardino County – is made up of a number of diverse communities that are changing in distinctly different ways, with different implications for RCCD (see again Chart A). The Inland Empire is generally defined to include the large cities of Ontario, San Bernardino and Riverside, among many other smaller communities, and is roughly bordered by the San Bernardino Mountains on the northeast, San Jacintos to the southeast, Chino Hills to the west and Santa Ana Mountains to the southwest. Vegetation and climate form something of a compromise between the coastal (to the west) and desert (to the east) regions.

Information from agencies such as Western Riverside Council of Governments (WRCOG), Southern California Area Governments (SCAG), and Riverside County, among others, together with commentary from community focus groups, provides a picture of the area's emerging changes that are relevant to RCCD planning.

Social and Cultural Change

Discussions by all community focus groups and local officials begin by acknowledging the explosive growth in area population that has taken place, and how that has changed both the physical and cultural composition of the communities represented. One common comment: the population explosion has taken place and now job growth is starting as businesses are moving into the Inland Empire because costs are still lower – for land and the necessary infrastructure – than in Los Angeles and Orange Counties.

One of the most active area planning agents, WRCOG, a 15-jurisdiction collaboration, presses for multi-unit, high-density development. Future area development patterns are (and will be) impacted by the Riverside County General Plan for unincorporated areas (roughly one-third of the county) – the 2003 version to be updated in 2008. Some of the most rapid growth is and will take place in unincorporated areas, limited only by environmental, conservation and preservation constraints and/or topography.

With the current, 2007 slowing in the housing market, building permits are modest. Mid-range homes are selling, but higher-priced homes are not. Still, the volume of development applications being reviewed by the County is at an all time high, suggesting the expectation of continued future growth. An on-going concern is the jobs/housing balance, exemplified by the desire that more area residents are able to work in the area – a plus for a variety of reasons, not the least of which are transportation difficulties and community cohesion. As jobs catch up with population and housing, however, housing prices are beginning to rise.

After some spurts and stops, ***Moreno Valley*** is currently growing rapidly – up 5% in 2005 after 3.5% growth in 2004 (Riverside County: 4.8% and 3.4% for the same years) according to DOF. "Early" 1980s growth in the area was due to housing costs that proved to be a kind of "safety valve" for individuals working in Los Angeles and Orange Counties. The early 1990s recession brought that expansion to a halt and by 2000, few units were being added.

With the downsizing of March Air Force Base (AFB) and loss of some 35,000 jobs, the surplus land was given to the March Joint Powers Authority (MJPA), made up of representatives of Riverside County and the cities of Riverside, Moreno Valley, and Perris for development. Consequently, there has been expansion of retail, office, and warehouse space in the MJPA due to "relatively cheap" land, reversing trends since 2000 with the arrival of newcomers to Riverside County and the soaring cost of living in Los Angeles and Orange County combining to make the area attractive for industry. Currently, over 2,000 units per year are added to Moreno Valley. The selection of MJPA by DHL as its new Southern California hub, operations beginning October 2005, has been controversial because of resulting air traffic and many low-paying, part-time jobs.

Like other parts of western Riverside County, Moreno Valley demographics have changed dramatically and K-12 schools are extremely diverse with a very transient population. The area's population is quite young and families relatively large – 3.65 individuals on average. Area employers are said to complain that workers they recruit cannot "communicate."

To the west, while growth in the city of ***Riverside*** has slowed (2% in 2004, but 0% in 2005), outlying areas continue their growth. ***Eastvale*** has "exploded" along with the adjacent city of ***Mira Loma*** and the area south of ***Corona*** is "beginning to." The city of ***Norco***, by contrast, has been relatively stable. Longtime residents see the area of Norco and Corona as a whole, but newcomers tend to see the two separately. The community's average age has declined as young families have moved in, many from Orange County. (Orange County residents are jokingly said to view the Inland Empire as a "vast desert." Norco is still referred to by some as the "horse town," where the number of horses is alleged to equal the number of people.)

As noted above, other communities with substantial potential for RCCD enrollment lie to the south of Riverside – La Sierra, Lake Hills, Woodcrest, Glen Valley, Mead Valley, and Perris. Important for RCCD planning is the rapidly-growing I-15 corridor south of Corona, extending all the way to Lake Elsinore, Murrietta and Temecula – also outside RCCD boundaries, but contributing students.

Also relevant to planning and along RCCD's northern border are Redlands, Grand Terrace, Highgrove, Rubidoux, Pedley, and Glen Avon – some within RCCD's boundaries, some in the San Bernardino district – all known to send significant numbers of students to RCCD. These communities are clustered around the heavily traveled I-10.

Environment: Climate, Water, Geology, Energy, and Air

Located between the coast and desert, RCCD area ***climate*** can characterized as mild to hot and semi-arid. Summer highs frequently reach over 90° F, but evening temperatures can drop as much as 30 to 49 degrees. Environmentally diverse, desert areas are characterized by 2" of annual rainfall, ranging to 12" (at the City of Riverside) to 18" in the San Gregorio Pass area. Overall, the County had 2" of rain by mid-2007, the driest year since record-keeping began in the 1870s – making the Inland Empire one of the driest areas in the U.S. It's incumbent on RCCD as it develops its three colleges and other sites to use water-conserving California native vegetation and other water conservation techniques.

Area ***water*** is derived almost entirely from groundwater sources managed by several agencies, including the Western Municipal Water District (WMWD), a member agency of the Santa Ana Watershed Project Authority (SAWPA), that serves a half-million people in a 527 square-mile area of western Riverside County. WMWD buys one-fifth of its water from the Colorado River Aqueduct, but most from the State Water Project from Northern California via the California Aqueduct. Two-thirds is treated, the balance raw, and is sold for domestic (3/4) and agricultural uses (1/4), the latter mostly to irrigate citrus and avocados. A number of other area residents/firms/agencies depend on private wells.

Area water management must be cognizant of competing agricultural and urban residential needs. Over 98% of Riverside County agricultural lands are irrigated. 2004 County agricultural value was over $1.13 billion, and water quality, irrigation efficiency and agricultural water reuse (reuse of reclaimed waste water and irrigation return water) are of primary concern. Add to this are water needs of the area's acreage devoted to industries with high water usage such as dairies, nurseries and golf courses, or those with specific water quality needs such as aquaculture – cultivation of the natural produce of water (shellfish, algae, and other aquatic organisms). Riverside County accounted for 29% of California's 2004 aquaculture production, the top such county in the state and 12th nationally.

Surface water quality is affected by sources ranging from treatment plant effluent to natural runoff. While groundwater quality has been generally constant, ammonium perchlorate has been found in the area and needs to be monitored. Increased urbanization continues to impact groundwater quality and some water lines cross earthquake fault zones in the RCCD, another risk for the water supply.

Area ***geology*** is perhaps best known for its three major earthquake faults: San Andreas, San Jacinto and Elsinore. At its closest point, the San Andreas is 11 miles from downtown Riverside, running through the San Bernardino mountains. Altogether this fault stretches 600 miles from Yreka in Northern California to the Mexican border. A somewhat "smaller" fault, the San Jacinto, extends 125 miles from El Centro to northwest of San Bernardino, passing through the intersection of I-10 and I-215, Loma Linda, and across SR 60 to the northern end of the San Jacinto valley. Still smaller is the

Elsinore fault, located southwest of Lake Matthews and running through Corona and south into Lake Elsinore. It is connected to the Whittier fault near the Santa Ana River in the Corona/Riverside area.

Much is known about where earthquakes are likely to occur – for, say, major faults such as the San Andreas, though not for poorly-understood faults – but not when. All of which underscores the need for continued seismic safety measures – in planning and buildings at RCCD sites.

Energy use in California is primarily fossil-fuel based (petroleum, natural gas and coal), and in the Inland Empire (IE) region provided largely by Southern California Edison (SCE) from its own nuclear and hydroelectric facilities, SCE contractors, and imported through the Independent System Operator (ISO). Two-fifths of the energy is used by residents, two-fifths by small and medium business, and the remainder by large business/industry and others. Average residents use more energy than businesses because of the IE's warm climate, newer/larger homes, and relatively few multi-family units.

Spiking energy costs and electricity shortages of the sort experienced in 2000-01 are due to a lack of new power plants, drought (particularly in the Pacific Northwest), dropping imports from adjacent states, lack of conservation, and deregulation (of generation, but not transmission or distribution).

Currently, the state's energy mix includes 12 percent "green" energy sources, including wind, solar, geothermal (underground steam/water) and biomass (burning woodwaste) to turn turbines, but until new plant capacity is in place, and conservation and alternatives such as the recent solar subsidy legislation are undertaken, the other factors will doubtless lead to rolling power outages in the IE's future. RCCD efforts at energy efficiency and sustainable building design will help address these problems.

Pollutants within the IE area ***air*** basin are generated by natural, stationary (business and residence), and mobile (motor vehicle and off-road sources like trains and construction). Mobile sources account for the majority of pollutants: ozone, carbon monoxide (CO), particulate matter (PM_{10}), sulfur dioxide (SO_2), lead, and other contaminants.

State and federal air quality standards, set at levels below what is harmful to humans, are managed for the area by the South Coast Air Quality Management District (SCAQMD). Despite substantial growth, air quality in the South Coast basin improved during the 1980s and 1990s. However, the area is still deemed "standard non-attainment" – meaning that air standards for ozone and PM_{10} won't be met for years – even though the basin recently met standards for nitrogen dioxide (NO_2, one component of ozone) and CO.

California legislation, AB 32 (2006), calls for a 25% reduction in the state's carbon dioxide (CO_2) emissions by 2020. To achieve this reduction, the Air Resources Board will set emission control targets for utilities, oil refineries, and cement plants that are to begin 2012. While helping improve area air, the impact on local economic development

will depend on regulatory costs compared to benefits of increased research and development in green technologies.

In any case, continued area development will increase air pollutants, primarily from motor vehicles – thus, the importance of future area transportation. Plans by SCAQMD to improve air quality rely on reducing mobile sources via telecommuting, alternative fuels, high-occupancy vehicle (HOV) lanes, ridesharing and the like.

Transportation

The importance of IE transportation to RCCD is highlighted by: (1) air quality, (2) the increasing cost to students for commuting to and parking at RCCD campuses, (3) training needs and constrained schedules of area individuals who commute mostly to the west and south for work or who commute into the area from, say, the Coachella Valley for work, and (4) the need for training of workers in the growing "logistics" industry – trucking, shipping, warehousing and distribution – in the Inland Empire.

Transportation is seen as a major problem for area students as well as residents. RCCD campuses appear to community observers as "far away (apart)," and parking perceived as "impossible" at Riverside City College, "difficult" at Moreno Valley, and "easy" at Norco. (*Student comments suggest they agree with this assessment, though improvements at Riverside City College may change this.*) The Regional Transit Authority (RTA) is analyzing possible bus service specifically between the three sites. Traffic problems suggest the need to control student costs, a topic addressed in the *Internal Scan* and *Scenarios and Simulations* papers.

The RCCD area contains hundreds of miles of roadways, but only five major routes: I-15, I-215, State Routes 91 and 60, and I-10 to the north (Chart A). To the south of RCCD's district boundaries are State Routes 74 and 79.

Area traffic problems are caused by commuters and by trucking, much of the latter "passing through," mostly on the major routes. More than two-fifths of all U.S. imports come into the ports of Los Angeles and Long Beach and are distributed by truck to the north (via I-5), and by rail through the Alameda Corridor in Los Angeles to the "inland port" or distribution centers around the Inland Empire, then by truck containers to the east (via I-10). Many resident workers commute to jobs elsewhere, mostly west toward Los Angeles and south to Orange County. Commuting into and out-of the RCCD area will increase substantially with both population and job growth.

Plans for area transportation improvements are underway, through the use of a ½ cent sales tax for area freeways, and others sponsored by WRCOG from a large multi-jurisdictional fee program (TUMF) to support mass transit and regional roads. The Magnolia Avenue, running north and south parallel to SR91, is a corridor that planners hope will move buses as fast as cars.

To existing stations at Corona and downtown Riverside (near RCCD), Metrolink plans to add others at Perris, Moreno Valley (near March AFB), Temecula and San Jacinto. A rail line has been purchased that follows the industrial corridor along I-215 roughly between March AFB and Perris. Development of Van Buren Boulevard and Cajalco Road, the future "mid-county corridor," into express- or parkway will stimulate growth of communities like Lake Mathews, Woodcrest and Glen and Mead Valleys. Also under consideration, though less-likely, is a tunnel through the Santa Ana Mountains to Orange County that would relieve the SR-91/I-15 "bottleneck" at Corona.

TECHNOLOGY

Information Technology Evolves and the Net Generation Enrolls

Like other regions of the United States, the implications of "virtual" entertainment – wearable or wireless handheld computers and other such devices – in the IE are unclear, but younger students are entering RCCD far more conversant than ever before with *information technologies (IT),* including hand-held devices (iPods, cell phones, instant messaging, iPhones), laptops and video games, and with a greater need to understand not only the electronics (mechanics), but also the moral and ethical ramifications of technological change.

A 2004 study by the Pew Charitable Trust found that:

- Nine out of every ten young people (12 to 17 years-of-age) have Internet access, and one of every two has broadband access. By comparison, just two of every three adults have Internet access.

- Three of every four "wired young" are instant messaging – "IMing" – in contrast to two of every five adults.

- There is still a serious "digital divide," between the "IT haves" and the "IT have nots," defined largely by income and race.

Not only will younger students come to RCCD with more skills and experience with and connection to IT than any prior student generation, but they also will be accustomed to rapid and broad access to IT. Known variously as the "net generation (NG)" or even "millennials," these 15 to 24 year-olds are accustomed to rapid, accessible, and multiple information sources. Moreover, because of public policy regarding secondary school accountability (like "No Child Left Behind"), many in this cohort enter college with more of a background in testing as the primary tool for school accountability than in learning as did prior cohorts.

Changes in Learning Styles Due to IT

Less clear (than the need), however, is how college teaching/learning styles will (should) change as a result of these developments. Notions that students are busier, in a more competitive environment, and aren't willing to put in the time are debatable – in fact, often debated by faculty (see *Internal Scan*).

What does seem clear is that students are increasingly comfortable with a more proactive learning environment, supported by multiple information sources. Consequently, class delivery that includes – in the same one to three-hour session – faculty lecture, student groups researching the Internet and problem-solving, presentations, discussion, and, perhaps, a wrap-up lecture appears appropriate. Recent discussions with faculty at a number of community colleges reveal this style is common. (The difficulty in the community college, of course, is that 15-24 year-olds enroll in the same classes as 25-54 year-olds, the two groups exhibiting dramatically different learning styles.)

Also emerging is the notion that many students will enroll to obtain skills and knowledge for jobs that don't yet exist and careers for which specific jobs have yet to be determined. This argues for "student majors" that are designed around clusters of skills and knowledge and are more multi-disciplinary than the traditional majors, which were typically designed around the skills and knowledge "inside" a discipline.

Among other IT developments,

- Print is gradually giving way to digital information storage.
- Web browser security difficulties – spyware, viruses and the like – continue to be a major problem.
- Debate continues about the management of the Internet, other nations objecting to the United States taking sole responsibility for a global tool. The opposing argument is that some of these other nations do not support free speech – a major precept of the Internet.

Energy, Bio and Nano technologies

Other technological developments of importance to potential RCCD training of expert technicians include work in energy, bio, and nano technologies.

Energy demand is beginning to outstrip supply because of the rapid development of China and India and little conservation in the U.S. Oil prices have increased to over $70 per barrel and there is concern about capping greenhouse gases (mostly carbon dioxide) which may be causing global warming. Consequently, considerable work is underway to develop non-fossil fuel alternatives such as solar, hydrogen, wind, nuclear, clean coal and biofuel. While less than 3% of motor fuels are currently derived from biofuels like

ethanol, fully one of every eight tons of U.S. corn went into the production of ethanol during 2004, and the ratio is increasing.

Biotechnology firms often seek employees they describe as "expert laboratory technicians," individuals who may be trained generally by colleges such as RCCD and are then trained by the firm in its specific, emerging applications. Debate about producing pharmaceutical chemicals from genetically modified corn continues. The promise of pharma crops may be diminished somewhat by potential liability from the risk of contaminating conventional corn and from foreign competition.

Nanotechnology is a broad term describing work with solid materials at the molecular level. Intel, for instance, uses nanotechnology to develop smaller and more powerful microprocessors. Other such work deals with film coatings (about 10,000 times thinner than a human hair) for application to optical devices like computer screens, bar code readers and solar panels.

Use of nanotechnology is expected to replace silicon with carbon, an important breakthrough since it's estimated that chip transistors can continue to shrink for no more than a decade. ("Moore's Law" holds that computer power doubles every two years by becoming smaller and more powerful.) Intel's goal, for instance, is to increase the number of switches per chip from a billion to a trillion – a thousand-fold increase – possibly by 2015.

Futurists like Kurzweil (2005) project the development of IT as more accelerated. Despite mixed results from Artificial Intelligence (AI), Kurzweil believes "singularity" will be achieved by 2030: combining the strengths of human intelligence – parallel, self-(re)organizing, and able to recognize patterns – with the strengths of machine intelligence – speed, memory and accuracy. At that point, he claims, computers will be indistinguishable from biological intelligence.

ECONOMICS AND JOBS

Economic cycles are important to RCCD planning because of:

- *Enrollment at RCCD*: as the RCCD area economy improves (declines) and individuals in the labor market work (need retraining), RCCD enrollment falls (rises), other things being equal.

- *Curriculum at RCCD*: development of the regional RCCD area economy dictates labor market needs, which in turn, suggest useful curriculum change.

- *Funding for RCCD*: as California 's economy improves (declines), state general and local property taxes and RCCD 's funding rise (fall), impacting the college's ability to deliver programs and services.

Current Short-Term Forecasts

Economic cycles are difficult to forecast and few agents do so for more than one or two years into the future. Consequently, RCCD long-range planning may best proceed by posing several plausible future scenarios that define what is likely.

A recent *Economist* poll of forecasters indicates the modest worldwide recovery from the 2000-02 downturn began to slow in 2004 and continues to in the U.S. (Chart G). Early analyses of the economic consequences of the 2005 hurricanes suggested a loss of several hundred thousand jobs in the near term and a modest slowing in GDP growth – consequences which seem to have taken place, but have been overshadowed by a slowing in housing and construction and high energy prices.

Chart G

Annual Price-Adjusted Rate of GDP Change

	2004	***2005***	***2006***	***2007***	***2008***
U.S.	3.7%	3.6%	3.1%	2.0%	2.7%
Euro area	1.3%	1.3%	3.3%	2.6%	2.1%
Canada	3.3%	2.9%	2.3%	2.4%	2.7%
Mexico	2.4%	3.3%	4.3%	3.2%	3.8%
Japan	1.3%	2.4%	2.3%	2.3%	2.3%
China				10.3%	9.7%

Source: Economist, 2007.

While recovery from the 2000-02 downturn has been less robust than other recent recoveries, optimistic analysts argue that the U.S. is in a period of long-term growth – albeit at rates less than those of the late 1990s – to be interrupted only by some event or "wild card," like a foreign financial crisis, stock market crash, oil/energy crisis, or other unexpected shock to economic activity – like the September 2001 terrorist attacks on the East Coast or 2005 hurricanes on the Gulf Coast.

The federal debt, continuing Iraq war and relief efforts are having a short-term impact on the federal budget which could eventually have an impact on federal financial support for RCCD. It has already effected support for student loans. And though California's economy has not yet been impacted – indeed, revenues are up (see below) – state aid to RCCD and other community colleges could also be affected. Moreover, employment and prices in the Inland Empire could be impacted as well. In short, RCCD staff may want to consider alternative external conditions as it goes about its planning.

The Nation's Long-Term Picture

For the longer-term, the key appears to be how consumers and financial markets react, and are supported by central banks like the U.S. Federal Reserve (the Fed). A series of recent increases in the federal funds (interest) rate – the bank overnight borrowing rate – designed to prevent inflation seems to have come to an end. Inflation in 2006 was just over 3.5% and with relatively high (in recent terms) interest rates, the housing market has

cooled and home builders' confidence is relatively low. Virtually all leading indicators signal slower growth ahead for the U.S.

On-going federal deficits, heavy corporate and individual borrowing, trade imbalances, continuing high energy prices, and costs for the "baby-boomers" pensions and medical care beginning toward the end of this decade, all portend possibly serious long-term difficulties for the U.S. economy. Without major changes in fiscal, trade and energy policies, the country's economy will seemingly be burdened by high on-going energy prices, inordinate debt and higher-than-normal interest rates possibly leading to reduced investment and slowed growth.

California's Economy

California economic growth in both 2005 and 2006 was larger than expected, because of business (particularly oil) profits. And, California job growth has been larger than expected in the face of a softening in real estate and higher-than-expected gas prices. The latter haven't yet affected consumer spending on other goods, but relatively high energy prices may eventually prove to be a drag, given the unsettled nature of world oil markets.

After several years of price stability, the California CPI jumped ahead by 4.4% in 2005 (Chart H). Because of inflationary pressures (as noted above), the Federal Reserve had increased the federal funds rate from 1.4% in summer 2004 to 5.25 % by late July 2006.

Chart H

Annual Changes

	Economist	*CA Legislative Analyst*						*CA DOF*
	U.S.	*U.S.*			*California*			*Calif.*
	GDP	*GDP*	*Pers. Income*	*Unemp. Rate (%)*	*Cons. Pr.Index*	*Unemp. Rate (%)*	*Pers. Income*	*Pers. Income*
2005	3.6%	3.7%	5.8%	5.1	4.4%	5.5	6.3%	
2006	3.1%	3.3%	6.3%	5.0	3.5%	5.6	5.7%	6.1%
2007	2.0%	3.0%	5.5%	5.2	2.5%	5.4	5.5%	5.3%
2008	2.7%	3.4%	5.8%	5.0	2.6%	5.4	6.0%	5.5%
2009		3.0%	5.5%	5.0	2.7%	5.3	6.1%	5.8%
2010		2.8%	5.3%	5.1	2.7%	5.3	6.3%	
2011		2.9%	5.4%	5.1	2.6%	5.3	6.0%	

Source: CA LAO (2006), CA DOF (2006), Economist (2007).

Consistent with the "slower growth ahead" forecasts for the U.S., both the California Department of Finance (DOF) and Legislative Analyst Office (LAO) predict the California economy will slow in upcoming years, though both agencies appear slightly more "bullish" than do forecasters on the Economist's Board.

California's personal income gains mirror those of the U.S. in the LAO's forecast, slowing through 2007 then increasing to 2010. Declining home values will produce some

wealth effect that will dampen consumer spending. Over the next several years, the main vulnerability for both the U.S. and California economies will be high and rising energy prices which, in turn, exert upward pressure on output prices and interest rates, slowing spending and near-term growth.

How RCCD's budget is impacted by economic forecasts and fluctuations is examined more fully below and in the paper on *Scenarios and Simulations*.

RCCD AREA ECONOMICS

The Los Angeles Economic Development Corporation (LAEDC) estimates that California's GDP ranks eighth in the world just behind Italy and ahead of Canada, and that the Los Angeles ports continue to be the nation's busiest trade hub, more active than New York, and ranking 4th in the world behind Hong Kong, Singapore and Shanghai (as reported by the Center for the Continuing Study of the California Economy). This activity in turn has a major impact on the economy of the Inland Empire.

While DOF forecasts a 1.2% job growth for California, John Husing's QER 2007 forecast for the Inland Empire job growth is 2.9% (also greater than EDD's ten-year average of 2.4% job growth discussed below). Currently, this "modest" growth is spurred largely by the managerial, professional and logistics sectors, and constrained by (lack of) construction.

The original economic base of RCCD's western Inland Empire area along the I-15 adjacent to Los Angeles County border, agriculture, has shifted to light manufacturing – with many small firms – which is expected to shift further into services over the next decade. Transportation, warehousing and distribution centers – the logistics sector – to the northwest in Ontario and to the north in San Bernardino have not produced the number of jobs that were anticipated. Still, warehousing and distribution play a significant role in the economy of the Inland Empire.

Overall area growth has resulted in high demand with the result that firms can't find "quality workers" for their positions. Focus group participants in this study observe that less than half of the County's population enrolls in postsecondary education and employers see potential workers who lack skills. This situation, it is feared, may prevent some firms from moving into the area. And while focus group participants describe some area vocational work by Regional Occupational Programs (ROPs), the commentary suggests that K-12 has abandoned, to some degree, occupational training and the effort to prepare students for jobs – not just specific skills, but the ability to communicate, work as team members, and exhibit "work ethics."

While there has been a desire on the part of financial institutions – largely for reasons of economics – to locate in the Inland Empire, a number may actually have departed due to a lack of skilled labor. For example, there is a lack of accountants and auditors for public agency work. Decisions by some firms not to locate in western Riverside County, it is

said, are due to the lack of culture and the arts. And while there are opportunities in engineering, waste management and CAD at RCCD, the County still has to search from "coast to coast" for new employees in such areas.

Over the long-term, area economic performance will depend upon several major factors, prominent among which are solutions to transportation problems. SCAG notes that area population has doubled since 1960, but freeway capacity increased less than 30% - congestion rising dramatically: current daily delays estimated at 2.2 million person hours in the five-county SCAG area, increasing (under current trends) to 5.2 million person hours by 2030. With two large ports, four major airports, and miles of freeway and arterials, the region faces what SCAG calls a "crisis in transporting goods." To address this, SCAG has prepared a Regional Transportation Plan with a variety of supply and demand (management) strategies. (Local transportation problems are described above.)

The Inland Empire (here measured by the Riverside, San Bernardino and Ontario Metropolitan Statistical Area) contrasts markedly with California in the changing balance of firms and jobs, during the current decade (Chart I). For example, compared to the statewide pattern in 2004, EDD estimates that area jobs were concentrated far more in

- Construction
- Logistics (transportation, warehousing and distribution)
- Local education

and far less in

- Information Technology
- Finance and Insurance
- Professional, Scientific and Technical

Between 2004 and 2014, EDD expects that the rate of area job growth will exceed that of California most in the areas of:

- Nondurable manufacturing
- Durable manufacturing
- Wholesale trade
- Logistics
- Self-employment
- Finance and insurance

Chart I
INDUSTRY EMPLOYMENT, 2004-14

	R,S.B., ONT MSA					CALIFORNIA					RCCD
	2004	*%*	*2004-14 Chg.*	*%Chg*		*2004 (000s)*	*%*	*2004-14 Chg.*	*%Chg*		*Growth Rate xCA*
Total Employment	1,281,800	100%	309,100	24%		16,377	100%	2,637	16%		1.5
Self Employment	101,600	8%	16,100	16%		1,308	8%	91	7%		2.3
Unpaid Family	1,500	0%	-200	-13%		24	0%	-4	-15%		0.9
Total Farm	18,700	1%	-1,500	-8%		369	2%	-13	-4%		2.3
Total Nonfarm	1,160,000	90%	294,700	25%		14,530	89%	2,569	18%		1.4
Natural Res.& Mining	1,200	0%	400	33%		23	0%	1	4%		9.5
Construction	111,800	9%	33,500	30%		850	5%	163	19%		1.6
Durable Manufacture	85,500	7%	5,900	7%		976	6%	26	3%		2.6
Nondurable Manufac.	34,600	3%	3,000	9%		557	3%	3	1%		14.6
Wholesale Trade	45,600	4%	18,400	40%		655	4%	112	17%		2.4
Retail Trade	153,800	12%	41,800	27%		1,618	10%	276	17%		1.6
Utilities	5,000	0%	800	16%		56	0%	3	5%		3.1
Logistics (Tr&Wh)	50,500	4%	18,300	36%		427	3%	67	16%		2.3
Information	14,000	1%	2,400	17%		482	3%	87	18%		1.0
Finance and Ins.	28,000	2%	5,700	20%		626	4%	76	12%		1.7
Real Estate,Rnt/Lse	17,700	1%	3,400	19%		276	2%	34	12%		1.6
Prof, Sci, & Tech	31,000	2%	11,500	37%		911	6%	243	27%		1.4
Firm Management	11,600	1%	1,200	10%		227	1%	37	16%		0.6
Business Support	82,900	6%	34,300	41%		948	6%	318	34%		1.2
Private Education	13,400	1%	3,600	27%		263	2%	74	28%		0.9
State Education	9,500	1%	1,700	18%		207	1%	49	24%		0.7
Local Education	99,000	8%	27,300	28%		935	6%	195	21%		1.3
Health & Social	104,900	8%	25,200	24%		1,297	8%	317	24%		1.0
Arts/Entertainment	15,300	1%	3,600	24%		237	1%	54	23%		1.0
Hospitality & Food	101,400	8%	29,300	29%		1,202	7%	218	18%		1.6
Other Services	39,300	3%	8,300	21%		504	3%	84	17%		1.3
Federal Gov	17,300	1%	0	0%		251	2%	9	4%		0.0
State Gov	17,000	1%	1,100	6%		256	2%	14	5%		1.2
Local Gov	69,700	5%	14,200	20%		747	5%	109	15%		1.4

RCCD AREA JOBS

The Inland Empire's unemployment rate of 4.6% is its lowest since 1987-89 and 2001, and is below the California rate of 4.9%, both figures bordering on what most economists would call "full employment."

California's 2001-05 annual rate of job growth (3.6% outside the San Francisco Bay Area) has been robust compared to that of the U.S. (0.6%), though it slowed to the same level (1.8%) in 2006 and is forecast at 1.2% in 2007. By contrast, as noted above, Husing's forecast for the Inland Empire is 2.9% for 2007, compares to EDD's ten-year annual average of 2.3% in Chart I.

The Inland Empire (again measured by the R,SB,O MSA) accounts for one-tenth of California jobs, and is growing at a rate than is half-again higher than that of the state (Chart J). Because of this growth, half of the job openings in the IE are from new jobs, half from replacements, in contrast to the statewide pattern where two of every five openings are new jobs and three are replacements. (Replacements openings are from workers leaving the occupation or IE area less those experienced workers "moving into" these openings.)

Chart J
JOBS, CALIFORNIA AND THE RIVERSIDE, SAN BERNARDINO, ONTARIO METROPOLITAN STATISTICAL AREA, 2004-2014

	California		*R,SB,OMSA*	
2004	16,376,500		1,281,800	
2014	19,013,700		1,590,900	
New Jobs	2,637,200		309,100	
Percent Change	16.1%		24.1%	
Annual Average				
New Jobs	263,720	41%	30,910	50%
Replacements	385,970	59%	31,188	50%
Total Openings	649,690	100%	62,098	100%
Average Hourly Wage	$16.14		$14.07	

Source: CA EDD (2007).

In 2005, average wages in the IE were $2 per hour or about 13% less than the statewide average, reflecting the contrasting character of area jobs in Chart J. However as Husing (2007) notes, this pattern is changing as the area higher paying sectors grow because of a growing competitive advantage due the influx of well-educated workers looking for affordable homes. For example, Husing estimates area management and professional firms will add 5,800 jobs (10% growth) in 2007 alone, while logistics adds 6,500 jobs (6.5%), not to mention replacement openings. And while Husing expects construction jobs will fall in 2007 by 2,500 (after adding 6,200 in 2006), the ten-year, long expectation for this sector is an average of 6,000 openings year, two new jobs for every replacement.

Like elsewhere in California, half of all IE area jobs in 2004 required less than a postsecondary education. By contrast, during this decade (2004-14), only one-third of new jobs will require that level of training, while two of every three new jobs formed will require some postsecondary education – one: a baccalaureate or higher degree, the second: training beyond high school, a certificate or associate degree.

Examining the area's estimated 62,000 annual job openings this decade by industry sector in Chart K, we find

- trade
- business
- construction

with the most openings, followed closely by

- hospitality/food
- education
- healthcare
- logistics

For the next step of determining those job skills and knowledge clusters most in demand – for potential RCCD training programs – we can parse the jobs by educational level required and further note the presence of other community colleges in the area by assuming RCCD can productively train for one-third of the area MSA's demand. (See Chart L.)

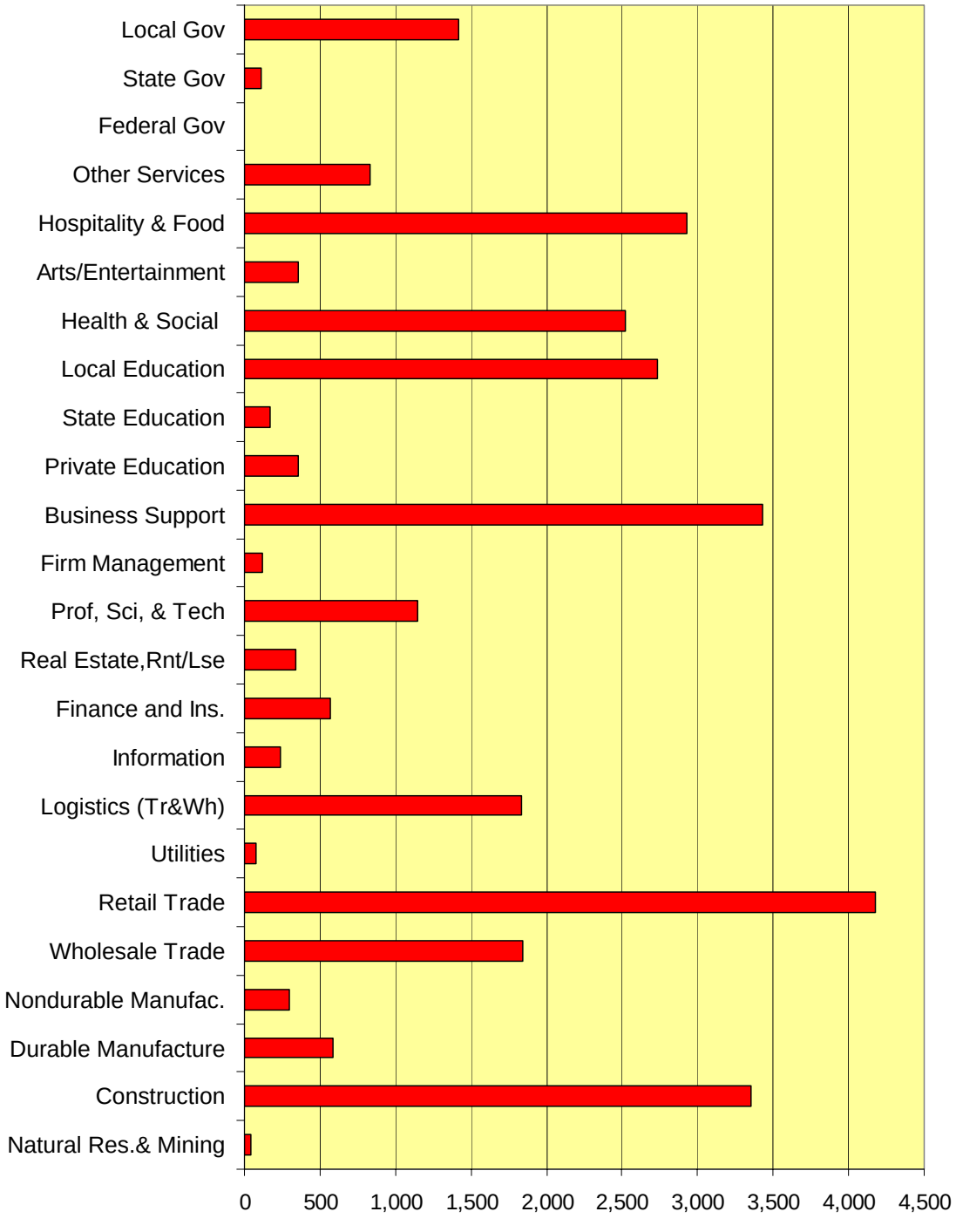
At the baccalaureate level, area demand is greatest for

- Business managers
- Accountants and auditors
- Elementary and secondary school teachers

Requiring some postsecondary (beyond high school), but less than a baccalaureate, and with the most RCCD service area openings are:

- First Line Supervisors
- Registered nurses
- Carpenters and other construction workers
- Truck drivers and other logistics workers
- Teaching assistants in elementary and secondary schools
- Customer service representatives
- Bookkeepers and accountants
- Automotive Mechanics

Chart K. ANNUAL INDUSTRY JOB OPENINGS, 2004-14 IN RIV,SB,ONT MSA



Source: CA EDD (2007).

Chart L
RCCD "SHARE" OF JOBS WITH MOST OPENINGS, 2004-14
RIVERSIDE, SAN BERNARDINO, ONTARIO MSA

Job	*Average Annual Openings**	*Median Hourly Wage***	*Approx CA Med Hr Wage*
Requiring Baccalaureate Degree			**$30+**
General and Operations Managers	380	$41	
Accountants and Auditors	237	$26	
Elementary School Teachers	201		
Secondary School Teachers	108		
Requiring PostSecondary Education			**@$20**
Carpenters	467	$22	
Truck Drivers, Heavy and Tractor-Trailer	377	$19	
Registered Nurses	286	$32	
Teacher Assistants	255		
Customer Service Representatives	248	$14	
Sales Reps/Wholesale	188	$26	
Bookkeeping and Accounting	178	$16	
Maintenance and Repair Workers	173	$16	
Automotive Mechanics	162	$17	
Administrative Assistants	155	$18	
Drywall and Ceiling Tile Installers	99	$18	
Cement Masons and Concrete Finishers	94	$18	
Dental Assistant	90	$12	
Medical Assistant	81	$14	
Total First-Line Supervisors	*671*	*$19*	
First-Line Supervisors/Retail Sales	192	$17	
First-Line Supervisors/Construction	177	$27	
First-Line Supervisors/Office	174	$20	
First-Line Supervisors/Food	128	$12	
Less than PostSecondary Education			**@$10**

Source: CA EDD (2007), McIntyre (2007).

*Openings for Riverside, San Bernardino, and Ontario MSA, including new jobs and replacements, calculated at one-third of area labor market need to note the presence of other community colleges in the area.

**California minimum wage: $7.50, to be $8 in 2008.

Federal minimum wage: $5.15, to be $7.25 in two years.

Other states:

5 have no minimum.

18 equal the federal rate.

29 greater than the federal rate.

Over 700 job openings per year are expected in RCCD 's service area for the sector of Business, including *managers and operators*, along with *accountants, auditors, and bookkeepers* (see again Chart L). All these jobs require some postsecondary education, virtually all a baccalaureate degree. Well over half are new jobs, the others replacements.

Given area growth in local education, the high demand of over 300 annual openings for K-12 *teachers* is expected, all requiring a baccalaureate with training for credentials. Also high is the demand for 255 *teaching assistants* annually – a different (older) niche, requiring a different level of (short-term) training.

Health Support and Health Care grow at just over the RCCD service area average of 2.4% annually – for jobs requiring some postsecondary education, but less than a baccalaureate degree. Three of every five of the estimated annual openings in Health will be in new jobs, the other two being replacements. The skills cluster most in demand, *Registered Nurses*, counts 286 openings each year (Chart L). The relatively high wage for RNs suggests their scarcity. Another 200 plus annual job openings in the area are expected for other health skills – possibly requiring training at the level offered by RCCD – mostly for *dental and medical assistants, and nursing aids*. Another high demand skill cluster, that of *nursing and home health aids*, is obviously entry-level and short-term training in character. This work, however, could be offered by RCCD as the entry to a career pathway in health.

Highest in overall demand at the postsecondary, but less-than-baccalaureate skill set, are *First Line Supervisors/Managers*, positions that cut across a variety of firms and industries: office, sales, production and manufacturing, food, construction and mechanics – all told, an estimated 670 job openings per year in the service area. First-Line Supervisors are journey(wo)men workers in each career area, who are moving into managerial capacities for the first time and who need training in personnel supervision and in an assortment of other managerial skills – planning, budgeting, law, regulations, and the like.

Another "on-the-job," high demand training need is represented by the *Customer Service Representative* (CSR), for which annual job opportunities in RCCD service area are estimated at 248 (Chart L). Like First-Line Supervisors, CSRs often are current employees whose skills suggest they would ably represent their employers, but who may need some added skills in, say, communications, and represent a training and upgrading challenge. Alternatively, CSRs could be trained from retired or retiring seniors who are experienced in business and who want or need to continue working.

Among the construction trades, *carpenters, drywall installers, and cement masons* are in high demand, and electricians, plumbers/steamfitters and welders will be in demand as well; over 600 openings in these crafts are estimated each year in the RCCD area.

The demand for logistics workers also is substantial, highlighted by *truckers*, drivers of heavy, long-haul trucks for whom there are nearly 400 openings per year in the RCCD

service area. Other logistics workers – in warehousing, inventory, and other activities – are more difficult to individually identify in the EDD data.

Another relatively high demand area is substantial that of installation, maintenance and repair workers, who often require some technical training beyond high school – either long-term on-the-job training, postsecondary education, or both. Estimates are for 173 *maintenance and repair* workers area openings per year in RCCD's area that require some training in these skills beyond secondary school. Moreover, as area traffic grows and the electronics of automobiles advance, *auto mechanics* increasingly require highly-skilled electrical and mechanical training beyond high school level – with some 162 openings annual openings in the RCCD service area.

PUBLIC POLICY

A variety of public policy issues at all levels – federal, state and local – is important to RCCD's planning.

Of concern to RCCD are possible changes to ***federal*** policies regarding the funding of community colleges and student financial aid what with the currently-large deficit, continuing conflict in Iraq, and continuing obligations to reconstruct the Gulf Coast – some estimate the federal cost at more than $100 billion – following the 2005 hurricanes.

Reauthorization of the Perkins vocational education act passed Congress without much change and was signed by the President (who had sought major changes). The Higher Education Act – due for reauthorization in 2003, but stalled and extended since – could ultimately impact financial aid for RCCD students. Recent budget act changes to student financial aid loans may result in increased interest rates thereby increasing (the present value of) the cost of enrollment.

The Senate appropriations subcommittee has completed work on a 2007-08 spending bill with increases for TRIO and GEAR UP, but level funding of Perkins grants and Pell Grant financial aid, though actions by the House and President likely will alter these proposals.

Proposed changes to welfare regulations by the federal administration would limit what counts as "work," tightening the definition of vocational education and excluding general education and ESL unless specifically job-related. If adopted, these regulations could impact RCCD enrollment beginning Fall 2007.

A September 2006 report by the federal Commission on the Future of Higher Education recommends changes in student access, costs and affordability, financial aid and institutional accountability. Initial proposals for student testing have been eliminated, but student assessment strategies remain. While adoption of many of the report's recommendations is problematic, the administration plans rule-making on student financial aid and on unit records for tracking students.

A slowing economy likely means that ***state*** fiscal policies will be increasingly restrictive, leading to more competition among the state's community colleges for state aid. California community colleges are somewhat insulated to large changes in their overall funding level, assuming they successfully leverage their share of the Proposition 98 (1988) funding guarantee for K-14.

Working from the state's economic forecasts, the LAO estimates state General Fund revenues and expenditures such that the state will continue to face operating shortfalls "in the range of $5 billion by 2008-09, falling to $3 billion by 2011.

Recent shortfalls in the state budget seem to have affected community colleges, and RCCD in particular, in 2002 when significant budget cutbacks were made and in 2003 and 2004 when student fees were increased dramatically. Otherwise, colleges like RCCD have experienced relatively stable budget increases since 2000, albeit lower than during the period of ample state revenues during the late 1990s.

The 2006-07 budget augmentation for community colleges of $969 million (2/3 of this on-going) is one of the largest in history and includes a 5.9% cost-of-living adjustment and 2% enrollment growth (4%, if prior year funding is utilized). Equalization funding of $179 million will be distributed under SB 361 (2006) that authorizes a new funding formula to replace the old program-based funding technique. Non-credit funding also is revised and improved at $30 million, technical education and scheduled maintenance supported, and a significant increase budgeted for student support services that are categorically funded: matriculation, basic skills, disabled services, EOPS, and CARE.

Policy changes in SB 361 are highlighted by a new foundation allocation that is based on college and center size. Estimates of this shift from program-based funding to the SB 361 base adds $7 million to RCCD's base revenue guarantee – an increase of 7% compared to the overall statewide increase of 3%. Moreover, when RCCD moves to from a 3-campus college to a 3-college district (see below), SB 361 further provides more foundation grant and categorical aid estimated at around $3 million for this RCCD reorganization alone.

After thirty years of unchanged and for some fast-growing districts (like RCCD) inequitable *funding policies*, changes (described above) beginning 2006-07 appear to favor fast-growing districts that are adding campuses and centers and possibly engaging in non-credit instruction (like RCCD). While improving RCCD's funding, it still isn't clear that the state public subsidy will ever be sufficient to sustain its potential growth.

The community colleges' student enrollment fee is reduced from $26 per unit to $20 per unit, beginning 2007. This significant change means a reduction of $90 or 10% in the direct costs facing a RCCD full-time equivalent student (FTES), and because of students' significant price-elasticity (see paper on *Scenarios and Simulations*) should push RCCD 2006-07 and 2007-08 FTES to higher levels than would otherwise have been the case. (State policy maintains fees at UC and CSU at existing levels for 2006-07.)

Proposed by the Governor, in his May 2007 budget "revise" for 2007-08 is a more modest increase of $226 million (3.8%) for inflation and FTES growth, though $100 million was added for one-time outlays for nursing and allied health equipment and career technical education. Legislative proposals differ, requiring resolution in conference committee.

The November 2006 election in California determined not only the state's executive administration for the next four years, but also provided for proposed long-term state infrastructure improvements, to be paid for by $43 billion in general obligation bonds. These improvements range from transportation to housing to flood control to education, the latter including capital funding for community colleges like RCCD.

The LAO estimates that the state's bonded debt-service ratio – the portion of annual revenues used for debt-service payments – will rise and peak at 4.8% in 2008-09 with current authorizations, rising and peaking at 5.9% in 2010-11 with the 2006 authorization. Debt service for bonds that fund recent operating budget shortfalls adds to this, but given the structural budget deficit, the LAO is cautioning against the Governor's plan to repay debt early.

Finally, an upcoming statewide community college initiative, qualified for the February 2008 ballot, would

- Guarantee community college funding from the State General Fund separate from K-12
- Reduce student fees to $15 per unit, to increase only with the Cost of Living
- Give "system" of community colleges and the State Board of Governors independent status.

In 2002, RCCD's ***local*** Trustees proposed shifting from a three-campus college to a three-college district, based on expected growth of 15,000 additional students during this decade. While this growth has not yet occurred, it will. Efforts at gaining approval for this significant college reorganization are continuing, and hinge in part on results of the accreditation visit in October 2007.

As specific needs are identified, facilities at RCCD colleges will be funded from the $350 million Measure C authorization approved by RCCD voters in March 2004. Moreover, recent improvements in the State funding of college operating budgets, designed especially to "equalize" or increase low-spending colleges like RCCD, should prove helpful in sustaining the growth of sometimes small, high-cost programs at RCC's two newer campuses as they are developed.

Besides the upcoming 2007 accreditation, two efforts are also significant for RCCD:

- The System Strategic Plan of the Chancellor's Office, adopted January 2006 by the Board of Governors and funded in part by the Irving Foundation.

Implementation strategies, timetables and teams for the Plan's five goals and numerous strategies are in place.

- Work on accountability reporting for the community colleges (ARCC), mandated by the Legislature (AB 1417, 2004), is underway to measure the colleges performance and stimulate local discussion of the metrics' implications.

EDUCATIONAL POLICY, PRACTICE AND TRENDS

As concerns about (1) student competencies, (2) proper use of learning technologies, (3) expanding competition, and (4) institutional accountability grow, community colleges confront new *challenges and opportunities*.

Broad Trends

Much recent research and discussion about community college education focuses on:

- shifting from teaching to learning paradigms
- longer-term education (with work) balanced with shorter-term job training
- imparting knowledge and meaning, rather than just data and information
- active, rather than passive, learning
- cooperative or collaborative, rather than competitive, learning approaches.

The Learning College

Many community colleges are adopting a *"learning college"* paradigm, which typically embodies, among other things:

- Collaboration (within and outside college communities)
- Adequate support for staff development and for applications of technology
- Appropriate facilities and equipment: technology, active learning rooms
- Assessment of learning outcomes for needed skills and knowledge
- Formation of groups – "communities" – of learners, both in- and out-of-class

For RCCD and other community colleges, a major challenge is to *teach* information technology and to *teach using* information technology (IT). Other IT challenges facing community colleges include choices about:

- The balance of face-to-face (FTF) versus distance learning (DL).
- The preferred DL mode, as between Interactive Television (ITV), Interactive Video Classes (IVC) and/or online (OL) instruction.
- How to balance OL instruction, using the "hybrid" course – taught partly online, partly face-to-face.

- Integrating OL with FTF on existing campuses/divisions or forming a new campus/division for OL, separate from existing delivery.
- Developing IT systems using "open source" code software vs. outsourcing.
- Research and teaching using gaming and simulation, a trend just beginning in higher education.

IT tools are even changing the pedagogy of face-to-face instruction: classroom instruction is delivered increasingly in a mode where, say, the faculty member lectures, student groups gather to research the Internet on wired or wireless equipment in the same classroom, they then problem-solve, discuss, and present their findings/conclusions within and across the groups, then the faculty member may lecture once again – all in the same hour or two and in the same classroom.

Ramifications for the configuration and equipping of such "active learning" spaces are significant. Such spaces replace the old tablet-arm chair lecture room where students sit in rows and passively listen, for the most part, to a faculty lecture. Work at community colleges similar in function to RCCD shows that the new *"active learning space"* should be designed to have:

- *moveable stations* (chairs and tables) to suit any needed learning configuration
- *access* at all room stations to *computer capability* and to the *Internet/Intranet*
- *a rich variety* of easily accessible presentation and discussion *media*
- *portable equipment* configurations in which components are easily moved
- *faculty offices* located *nearby* or even *adjacent* to learning spaces

The area – as measured in assignable square feet per station (ASF) – required for the "learning space" is greater than the traditional lecture class chair provision (in most cases, by 50%), but less than the area needed for traditional, fixed stations of, say, a chemistry lab as suggested by McIntyre (2004) in Chart M.

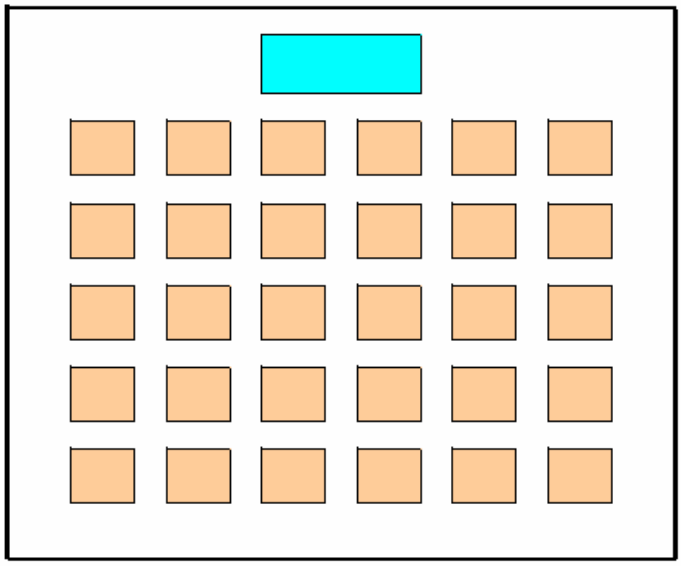
Also emerging as a component of the higher education pedagogy is the use of computer simulation and gaming as a tool not only for instruction, but also as a tool for research on the behavior of those playing the games.

Other Trends

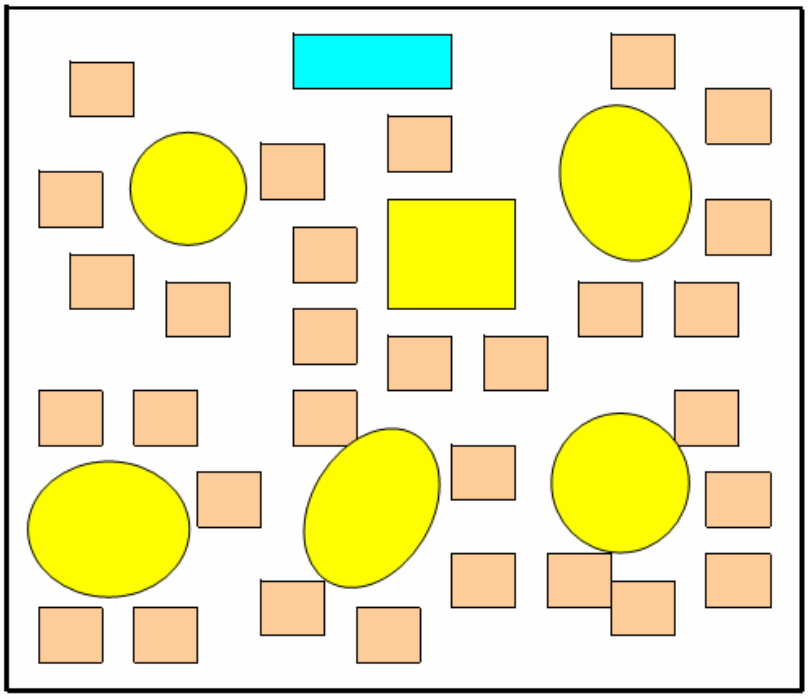
Other specific external events and trends in education important for RCCD planning include:

- While the number area high school graduates will continue to increase beyond the end of this decade (see above), the prior preparation of *younger RCCD students* is problematic. Beginning 2005-06, California high school seniors have been required to pass an exit exam. Those entering RCCD are more often likely to be limited-English speakers.

Chart M: COMPARING LECTURE TO ACTIVE LEARNING SPACES



LECTURE ROOM



ACTIVE LEARNING ROOM

McIntyre, 6/07

- *University of California and California State University policies* on fees, admissions and remediation will likely continue to impact the number and kind of future RCCD enrollments. Recent budget proposals and agreements suggest that the universities' admissions may become increasingly restrictive and fees relatively higher, with the result that relatively more young students – who complete high school may attend RCCD .

Competitors and Collaborators

Activities of *other postsecondary education providers* (competitors or collaborators), located in the RCCD service area, are important to RCCD planning, and among such institutions are:

- other public and private community colleges and four-year institutions,
- proprietary institutions, non-profits and agencies like the University of Phoenix, Jones International, the Military, and community-based organizations, and
- business and industry (McDonalds, GM, Cisco, Oracle, Harcourt, and others).

The three other community college districts adjacent to RCCD's district area are Chaffey to the west, San Bernardino to the north, and Mt. San Jacinto to the southeast (see again Chart A). Typically, RCCD enrolls students from all three districts – especially along its northern and southern borders.

Chaffey plans a significant Center on 100 acres in Chino Hills, near RCCD's western border. However, relatively few students from this area attend RCCD. By contrast Mt. San Jacinto plans to offer 76 classes in Fall 2007 at two centers in Temecula, a significant development for RCCD in view of its market penetration in this area. Growth of this delivery and potential development of the Menefee campus near Perris will impact RCCD enrollments from areas just south of its District boundaries. (*Scenarios and Simulations* will contain estimates of the numbers involved.)

RCCD colleges are major transfer feeders to California State University San Bernardino, University of California Riverside, La Sierra, Loma Linda, Redlands, and other four-year institutions. The usual "virtual" opportunities – University of Phoenix and others – are present, and a number of "competitor" proprietary schools preparing students for the workforce are located locally in the Inland Empire.

Relative to competitors, students often report choosing to enroll at a community college or center because it is:

- Closer to home (well known, inviting, and low cost)
- Offering a specific instructional program, not conveniently available elsewhere
- Lower cost
- Smaller and less intimidating
- Attended also by friends or relatives

- A new start, if beginning at another institution didn't quite work out

Focus group participants say that experiences of local employers with area trade schools suggest that they (trade schools) may lack quality, but that RCCD seems to be "losing ground" in this competition. Community members see RCCD providing students with a broader education and training package – and, therefore, better preparing them – than do trade schools where the emphasis is narrowly job-skill training. Still, the "losing out" comment needs further review.

Adding to this problem is the declining support for vocational education in K-12 as it is forced toward college-prep work and more emphasis on standardized testing, even though the latter is argued to be a "good thing."

K-12 representatives feel they've had strong relationships with RCCD, highlighted not only by the "middle college" efforts, but also by the "Passport" and other collaborative programs. (There is some interest in reviving the Passport program, an effort that begins with 5th graders.) Despite these positive comments, one principal (surprisingly) expressed the desire to simply "partner with RCCD" in an unspecified manner, and another K-12 official talked of the need to revive apprentice programs and to add and expand RCCD-supported internships for students working at jobs throughout the RCCD service area.

Middle college efforts, involving local high school students at RCCD are viewed by the community members as helpful, both in Moreno Valley and at the Norco campus. While the Norco arrangement is described as serving "normal" students – neither the Advanced Placement nor the "at risk" individuals – such students in the focus groups appear unusually motivated. This suggests that expansion of the Middle College may need to emphasize, among other students, those whose interest in completing high school and enter college appears to lag. (See more on this in the *Internal Scan*.)