

*Computer-Aided
Planning (CAP)
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PLANNING ASSISTANCE

FOR

**PERALTA
COMMUNITY
COLLEGE
DISTRICT**

**SCAN OF
CONDITIONS
EXTERNAL TO
PCCD**

DRAFT

Chuck McIntyre
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**PLANNING ASSISTANCE
PERALTA COMMUNITY COLLEGE DISTRICT
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CONTENTS	PAGE
Introduction	3
Demographics	6
Infrastructure	18
Technology	22
Economics and Jobs	25
PCCD Area Economics	27
PCCD Area Jobs	28
Public Policy	34
Educational Policy, Practice, and Trends	37
Appendices	42

PLANNING ASSISTANCE PERALTA COMMUNITY COLLEGE DISTRICT SCAN OF CONDITIONS EXTERNAL TO PCCD

INTRODUCTION

This *External Scan* is one of several papers from a project designed to help Peralta Community College District (PCCD) conduct its long-range strategic planning.

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

- Project design by the contractor (Chuck McIntyre), as modified by PCCD staff
- Extensive meetings with PCCD staff on project intent, methods, and findings
- Focus groups with individuals from communities in the PCCD service area
- Focus groups with students, faculty and staff from PCCD college campuses
- Information and data gathering and analysis by the contractor from a variety of sources inside and outside PCCD
- Extensive review of proposed findings, implications and strategies with staff in various meetings of the Strategic Management Team (SMT), District-Wide Educational Master Planning Committee (DWEMPC), and other groups.

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

- *External Scan*: of external conditions and the educational needs of PCCD's students and communities
- *Internal Scan*: of conditions internal to PCCD; how well it is meeting the educational needs
- *Findings and Conclusions* for PCCD colleges resulting from the above work.
- *Scenarios and Simulations*: of the enrollment implications of future scenarios

In a closely related project, the Contractor provides consultation and written papers on the issues involved in linking facilities to educational planning, working with PCCD staff and with facilities master planners WLC Architects, Inc. of Emeryville and Maas Companies, Inc. to ensure an effective process.

Peralta Community College District (PCCD) is one of 72 public community colleges districts in California and serves the six communities of Albany, Alameda, Berkeley, Emeryville, Oakland and Piedmont in the East Bay Area County of Alameda (Chart A). The district supports four colleges: Laney, Merritt, Alameda and Berkeley and a variety of centers and sites throughout its service area.

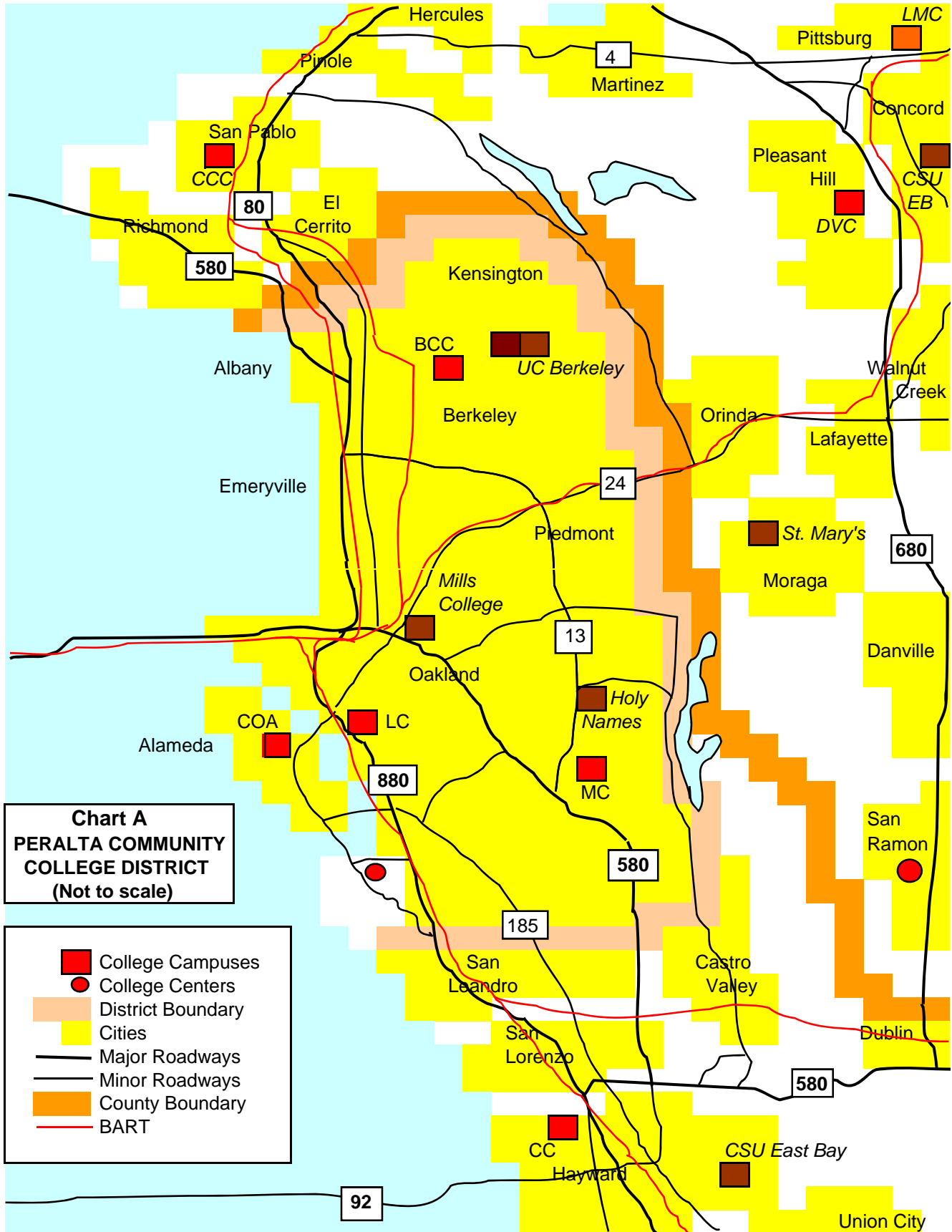


Chart A
PERALTA COMMUNITY
COLLEGE DISTRICT
 (Not to scale)

- College Campuses
- College Centers
- District Boundary
- Cities
- Major Roadways
- Minor Roadways
- County Boundary
- BART

While growing modestly – at just over half the rate for the state as a whole – PCCD’s service area communities are quite diverse, culturally and economically, and like many other mature urban areas, will experience the beginning of substantial retirements of “baby boomers” and the likely leveling or downturn in the number of local high school graduates by the end of this decade. These trends and PCCD’s recent history confront the district with complex challenges and questions:

- How will the East Bay Area evolve and, as a consequence, how should PCCD evolve?
- How should the curriculum evolve, where should it be located and how delivered: on-campus, face-to-face; partnerships; distance learning; and in what kinds of class and out-of-class facilities?
- How can PCCD maintain robust basic skills instruction and an effective 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 East Bay.
- How should PCCD be organized: as a four-college district (as at present), four-campus college, or in some other way? What delivery modes and organization and staffing changes will maximize the district’s access and program quality?
- What kinds of enrollment management strategies will enable PCCD to fulfill its mission, and meet its goals and objectives? What strategies best support the priorities of fiscal stability and sustainability?
- To what degree should the colleges make their market penetration (access) “more consistent” across their different service area communities and specific clientele “niches,” and increase overall area access?

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

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

DEMOGRAPHICS

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

Work below on PCCD's service area demographics relies on estimates and projections by the U.S. Census Bureau, California State Department of Finance (DOF), Association of Bay Area Governments (ABAG), Alameda County, and GeoLytics, along with plausible extrapolations by the author of this paper.

Modest Growth

The East Bay Area served by PCCD is among the slowest growing areas of California. In contrast to the California average of 1.6% annual growth for the past six years, Alameda County (and the PCCD area within that) has grown at 0.7% - about half the statewide rate – and the West Bay Counties of Marin, San Francisco at less than 0.5% (Chart B). Growing slightly more are Santa Clara County to the south at nearly 1% annually and Contra Costa County to the east at 1.3%.

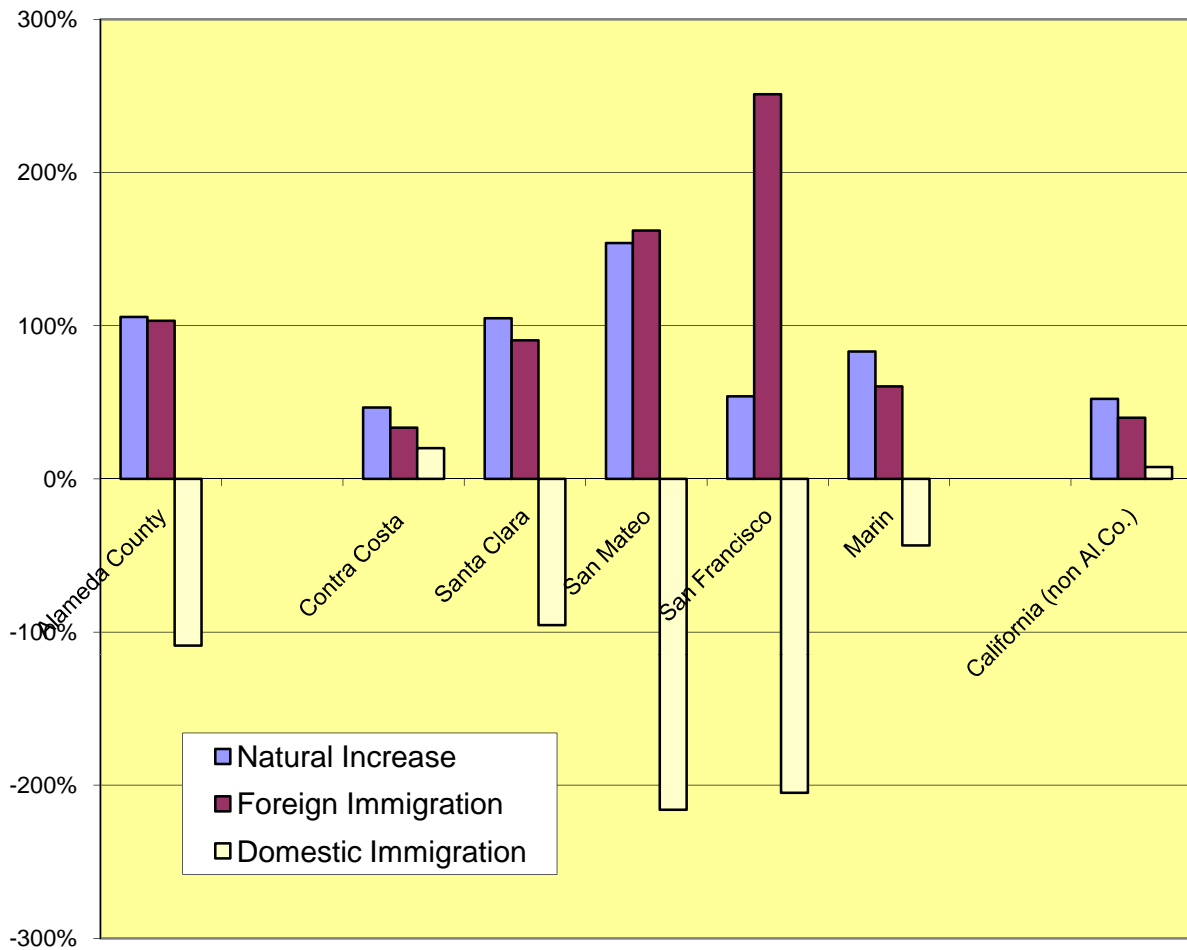
Also of significance are the different patterns of growth. For California generally, natural population growth (births less deaths) and migration contribute equally to the state's 1.6% growth (see again Chart B). And about four of every five migrants entering California are from foreign countries, the other one from another state in the U.S. – “domestic immigration.”

Alameda, Santa Clara and San Mateo Counties present quite different population patterns in that natural increase is partly offset by a negative combination of foreign migrants entering the county while local residents leave for other areas of the U.S. – some doubtless to California locations for more affordable housing in outlying areas like Contra Costa, Sacramento and Solano Counties – negative domestic migration. San Francisco and Marin Counties are yet different in that their negative domestic immigration is more than offset by positive foreign immigration.

Over the past fifteen years, PCCD areas within Alameda County have increased at a similarly modest rate, +0.7% yearly, as the County (Chart C). During this period,

- Albany and Piedmont declined,
- Alameda grew little,
- Berkeley and North Oakland (ZIP codes generally north of Laney and Merritt) grew nearly 10%, and
- South Oakland and Emeryville/West Oakland grew more rapidly.

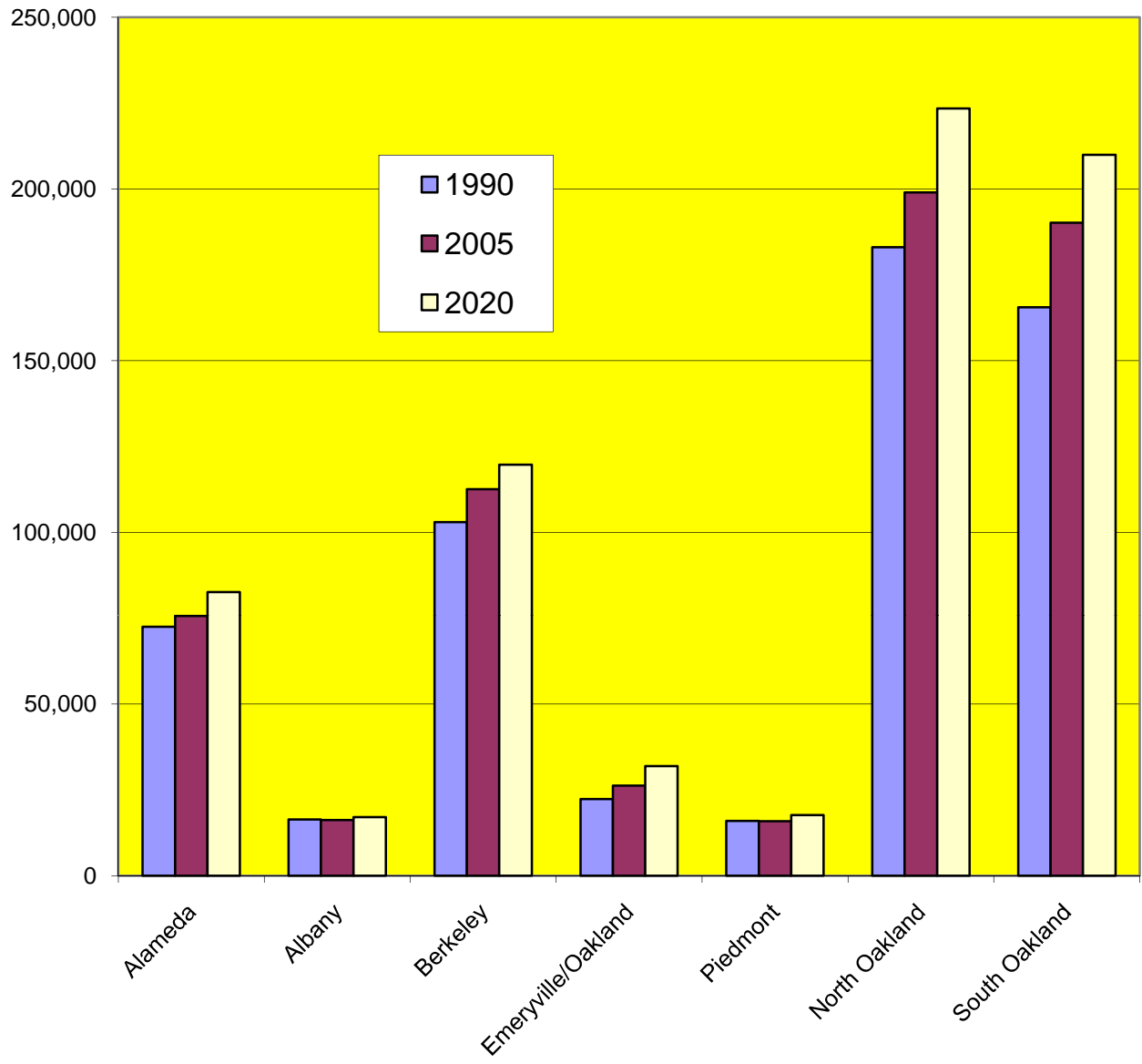
**Chart B. Population Change and Components,
Alameda and Bay Area Counties, 2000-06**



	ANNUAL GROWTH 2000-06	PROPORTIONS OF CHANGE COMPONENTS, 2000-06			
		Natural Increase	Migration Total	Foreign Immigration	Domestic Immigration
Alameda County	0.70%	106%	-6%	103%	-109%
Contra Costa	1.33%	47%	53%	33%	20%
Santa Clara	0.95%	105%	-5%	91%	-96%
San Mateo	0.43%	154%	-54%	162%	-216%
San Francisco	0.46%	54%	46%	251%	-205%
Marin	0.43%	83%	17%	60%	-43%
California (non Al.Co.)	1.57%	52%	48%	40%	8%

Source: CA DOF (2007).

Chart C. POPULATION, PCCD AREAS, 1990, 2005, 2020



City/Area	LAST 15 YEARS			NEXT 15 YEARS				
	1990	Change	%Chg	2005	2005	Change	%Chg	2020
Alameda	72,500	3,166	4%	75,666	75,666	6,940	9%	82,606
Albany	16,350	-145	-1%	16,205	16,205	838	5%	17,043
Berkeley	103,000	9,543	9%	112,543	112,543	7,134	6%	119,677
Emeryville/Oakland	22,350	3,892	17%	26,242	26,242	5,664	22%	31,906
Piedmont	15,936	-45	0%	15,891	15,891	1,782	11%	17,673
North Oakland	182,986	15,955	9%	198,941	198,941	24,470	12%	223,411
South Oakland	165,555	24,613	15%	190,168	190,168	19,757	10%	209,925
TOTAL	578,677	56,979	10%	635,656	635,656	66,585	10%	702,241

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

The next 15 years are expected by the Association of Bay Area Governments (ABAG) to exhibit virtually the same overall rate of growth, but with differences among PCCD's "communities":

- While relatively small in numbers, growth rates in Alameda, Albany and Piedmont will pick up.
- North Oakland's growth will increase, but Berkeley's will slow
- Emeryville/West Oakland's growth rate accelerates
- South Oakland's growth rate slows.

Community Diversity

It is a gross understatement to observe that PCCD's district area is quite diverse, with different socioeconomic, age and ethnic groups living throughout the communities served by the district. There are distinct differences in specific areas, however, and as PCCD assesses its performance in providing individuals access and makes enrollment management plans for future delivery, these differences will play a key role. (More on this in the *Internal Scan*.)

In general, household incomes rise as one goes from the bay shore to the east, into the hills, but fall from north to south across PCCD's district (Chart D). For instance, apart from UC Berkeley's community, East Berkeley residents report nearly twice the median household incomes, \$80,000 on average, as do West Berkeley residents. Similarly, Southeast Oakland incomes – around \$50,000 per household for those living around and east of I580 (see Chart A, Appendix A and Appendix B for area locations) – are reportedly 50% higher than Southwest Oakland incomes, reported by individuals living around the Nimitz freeway (I880) along the bay shore.

Households are predictably the smallest – averaging less than two individuals (the districtwide average is 2.5) – in the "downtown core" of neighborhoods just north of Laney College. Notably, many households in these neighborhoods have no wage earner and as a consequence report the area's lowest median household incomes, just over \$20,000 annually. By contrast, moving to Laney's east and south, one encounters ever-larger households, averaging three persons, then between three and four as one approaches San Leandro and the southern boundary of PCCD's district.

As expected, these southern district areas also have the largest proportion of potential "first-time college-goers," with 17% of the population in the 15 and 24 age cohort (Chart E). Oakland Southwest is the only area in PCCD's district in which the number of individuals 15 to 24 exceeds the number 55+ - the reverse being true every where else (except, of course, UC Berkeley). Thus in other areas, the 15 – 24 year-old group is much smaller, as little as – in some neighborhoods like Piedmont and Northeast Oakland, near SR24, and Kensington in Berkeley – less than one in every ten. Correspondingly,

Chart D. Median Household Income, by PCCD area, 2006

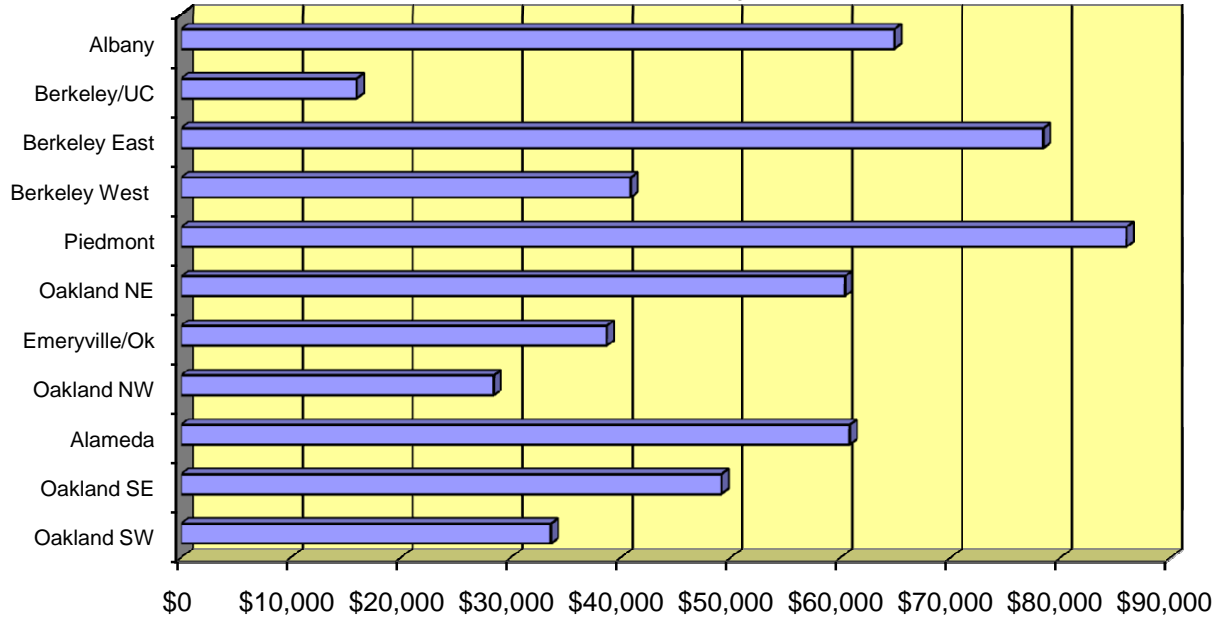
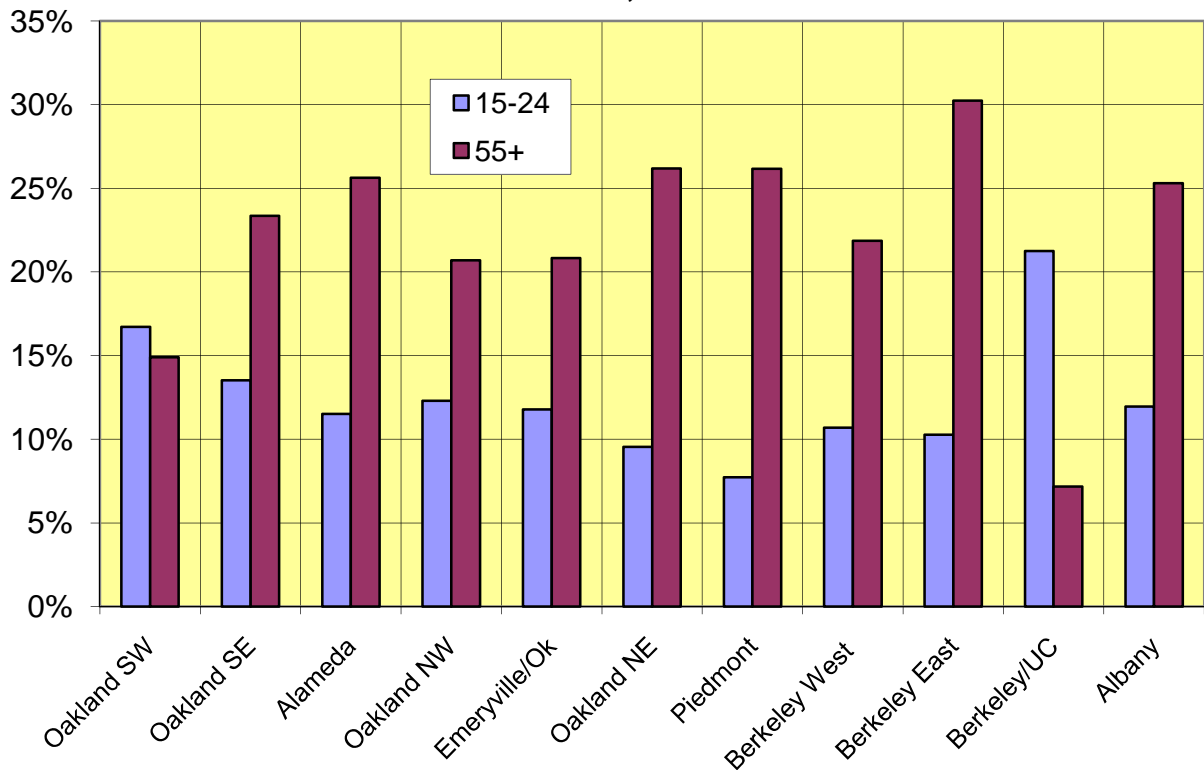


Chart E. Age Groups as a Percent of the Total Population, PCCD areas, 2006



Source: Appendices A and B.

these same neighborhoods, in the Berkeley and Oakland hills, report more than one in every four residents as over 55 years-of-age.

While different ethnic groups live throughout the region, there are concentrations of individuals by ethnicity. For instance, two-thirds of the area's Asians live around Laney College in Oakland and the College of Alameda in the city of Alameda. More than three of every five Hispanics live south and east of Laney College in Oakland. Half of the population in PCCD's southernmost neighborhood, just north of San Leandro, is Hispanic. African Americans live mostly in Oakland, to the south and just north and west of Laney College, and in Emeryville.

More Rapid Adjacent Growth

Like most urban community colleges, PCCD colleges enroll a substantial number of their students from outside the district's boundaries – some 6,600 or one in every four students in Fall 2006 (see *Internal Scan*). Moreover, non-district students increased by 1,300 (25%) between 2000 and 2006, while the number of students from inside the district was unchanged. As expected, most non-district students come from communities just outside PCCD's borders: Richmond and El Cerrito to the north and San Leandro, San Lorenzo and Castro Valley to the south.

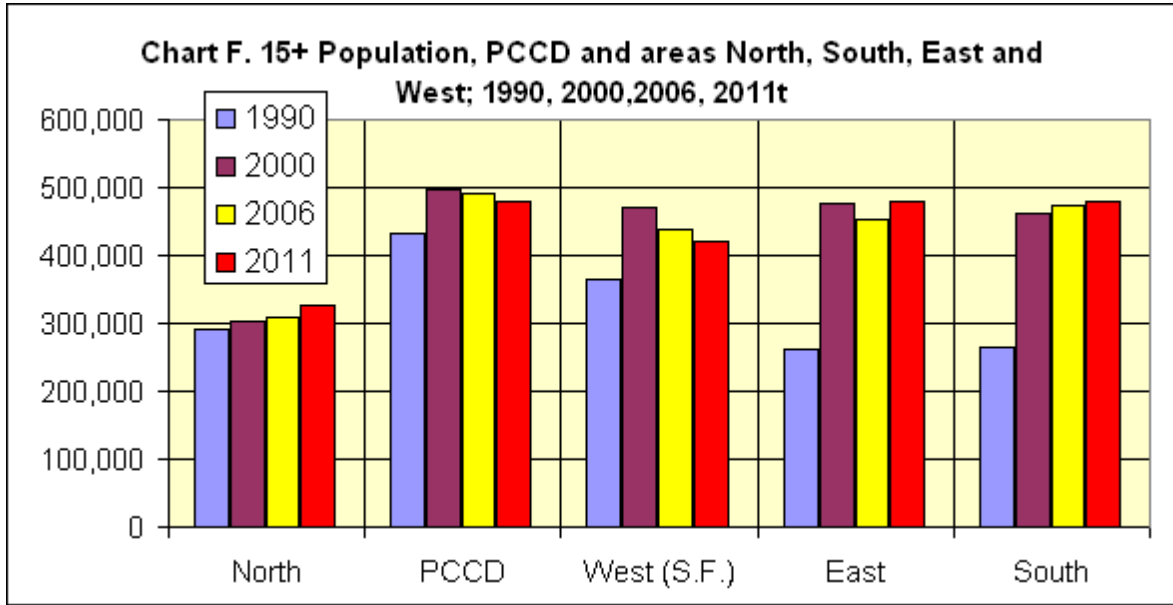
The importance of these patterns is that while PCCD's population of "college-going" 15+ year-olds is declining, adjacent areas have declined to a lesser degree, stabilized, or are even increasing. In the short-term, PCCD's decline is expected accelerate somewhat while areas to the north, especially Richmond, will grow more rapidly (at over 1% per year) and areas to the south, like San Leandro, San Lorenzo and Castro Valley continue their gradual decline (Chart F and Appendix C).

By contrast, areas east of the hills and PCCD's boundary are expected to grow again – also at more than 1% annually – after declining over the past six years, since 2000.

While PCCD's overall 15+ population is decreasing, several communities and neighborhoods have been and/or are increasing. Through the end of this decade (see Appendix C):

- Neighborhoods east and south of Laney College continue to grow.
- Neighborhoods just west of Laney College have grown, but may stabilize.
- West Berkeley continues growing.
- North Berkeley, growing for the past six years, is expected to decline.

The *Internal Scan* uses these data to assess PCCD's access (college-going rates) for different age groups by community/neighborhood for several benchmark dates and the paper on *Scenarios and Simulations* uses these data for forecasts of future enrollments and associated levels of access for different plausible scenarios.



	1990	% Chg Yearly	2000	% Chg Yearly	2006	% Chg Yearly	2011
North	291,883	0.4%	302,630	0.4%	310,153	1.1%	326,618
PCCD	431,351	1.5%	496,544	-0.2%	491,060	-0.4%	480,266
West (S.F.)	363,926	2.9%	470,132	-1.1%	439,251	-0.8%	420,639
East	262,550	8.2%	477,240	-0.9%	451,921	1.2%	478,962
South	265,003	7.4%	462,309	0.4%	473,744	0.2%	478,499

Source: Appendix C.

Increasing Age and Diversity

While broad trends suggest continued flight to the suburbs of the young – in search of affordable housing – there also is something of a “return to the metropolitan downtown” of often older individuals who are able to afford the ever-increasing housing prices and values typically resulting from physical renovation – something of a “re-gentrification of the older urban center. Reinforcing this trend could be the revitalization of downtown retail trade as advocated in this year’s McKenzie & Company report for the Oakland Metro Chamber of Commerce. (See more on this below under “economics.” While housing prices are currently at a hiatus due to the sub-prime mortgage crisis, long-term price trends in the downtown area are likely to continue rising.)

Like many other older urban metropolitan areas, PCCD service area population is becoming older and more diverse. And as we see below, consistent with the aging population, the number of graduates of area high schools will decline.

During the current decade (2000 to 2010), it is estimated by the California State Department of Finance (DOF) that Alameda County – and by historic extension, PCCD’s

service area – population cohorts that are less than 55 years-of-age are nearly unchanged in number, while those 55+ are increasing by nearly 100,000 or more than one-third (Chart G and Appendix D). This dramatic aging is expected to continue through the next decade (2010 to 2020), highlighted by a 2% loss of individuals of working age (25-54) and modest increase of 1% in those of “college-going age”(15-24).

The area’s already diverse population is becoming more so as individuals of Asian and Hispanic background are increasing annually – during the current decade – at 2.5% and 3%, respectively, while African American and White populations are both declining at about 1% per year (Chart H).

Notably, within these trends, the numbers of 55+ African Americans and Whites increase, but all other age groups (in these two ethnic groups) decrease. This is in marked contrast to all other ethnic groups wherein all age cohorts are increasing.

These same trends are expected to continue in the County and in PCCD’s area during the next decade, ending 2020. Given PCCD’s share of Alameda County population cohorts, the district can expect the following approximate number of potential students in the 15-24 year-old cohort at 2010 and 2020:

	2010	2020
African American	11,084	7,249
Asian	18,103	21,980
Hispanic/Latino	23,970	30,756
White	22,676	17,266
Other	4,854	4,259

Source: Appendix A.

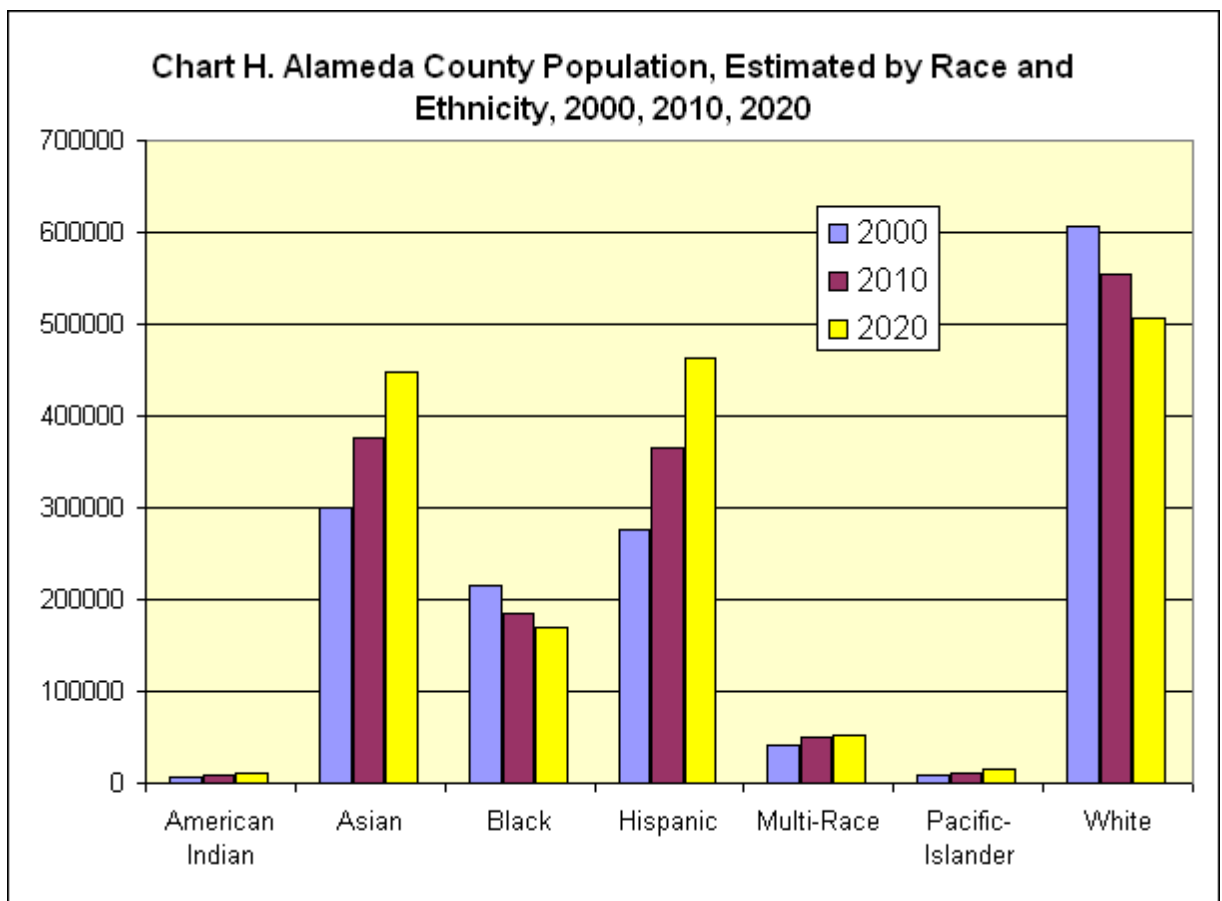
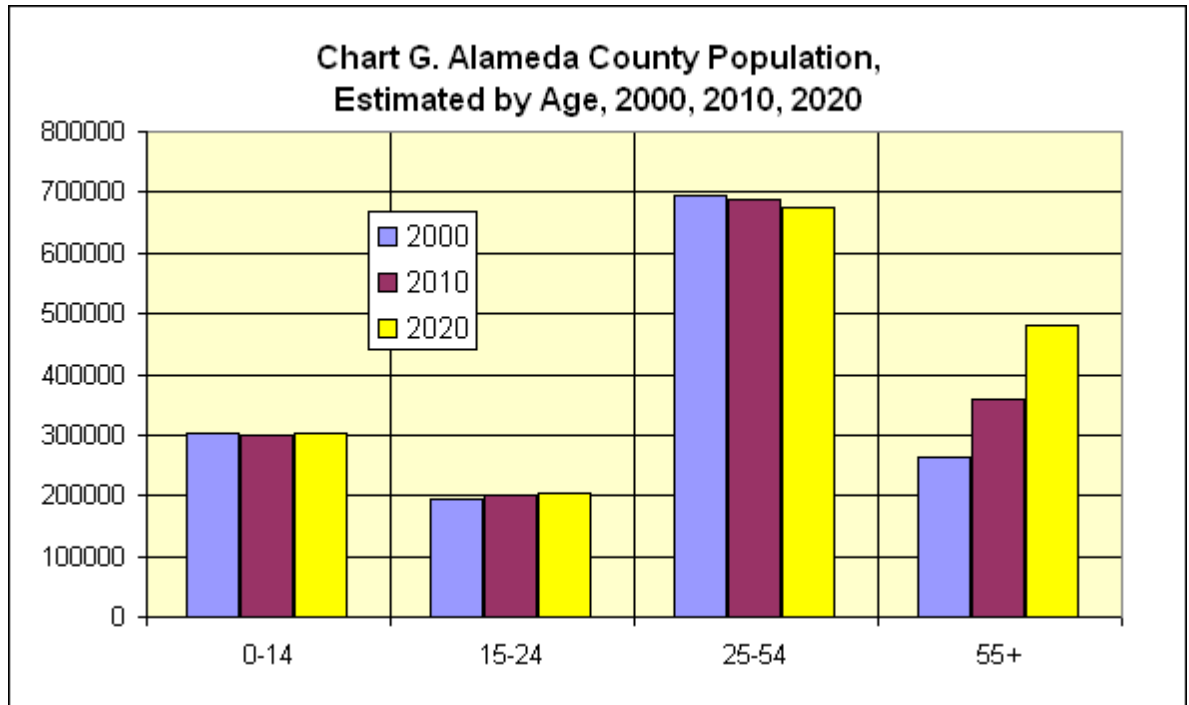
Both Asians and Hispanics will outnumber Whites and African Americans in the 15 to 24 year-old cohort by 2020.

By contrast, among 55+ year-olds at 2020, Whites will outnumber Blacks by 4 to 1, Hispanics by 3 to 1 and Asians by 2 to 1. (See more on this under “access” or college-going in the *Internal Scan*.)

Between 2000 and 2020, there will be an expected decline of about 20,000 in the area’s “working population,” those aged 25-54. This decline will be made up entirely of African Americans and Whites, while this age cohort for all other ethnic groups is expected to increase. Area Hispanics aged 25-54, for example, are expected to increase in number from 121,000 to 200,000, a robust positive change of 79,000 or two-thirds.

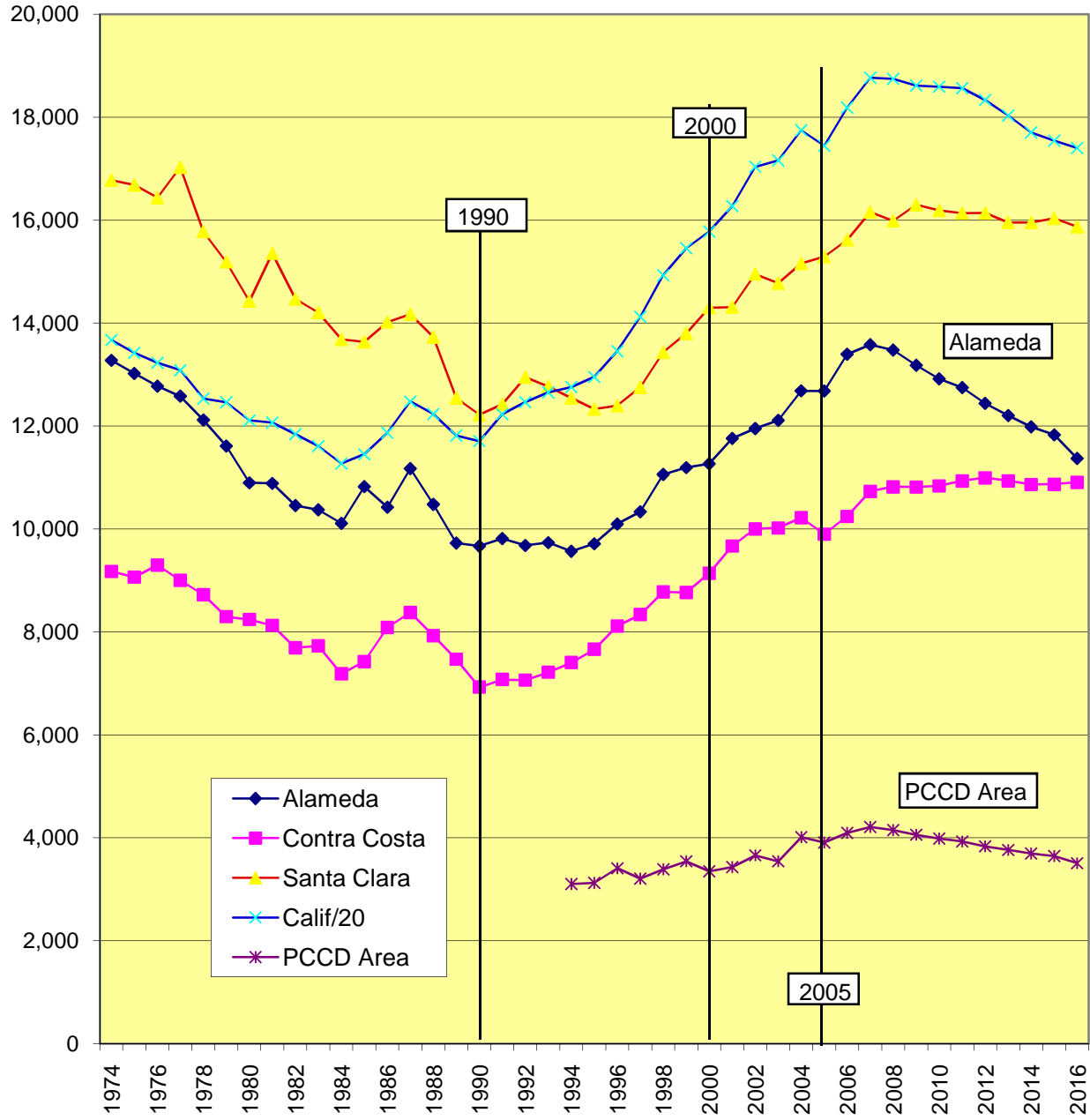
Area High School Students: Declining Graduate Numbers

After fifteen years of decline, the numbers of high school graduates hit a relative low in 1990 (Chart I). Following that low, most East Bay Area high schools, including those



Source: Appendix A.

**Chart I. High School Graduates, PCCD Area;
Alameda, Contra Costa, Santa Clara Counties;
California; 1974-2016**



Source: Appendix E.

feeding PCCD, have reported their graduates increasing at between 2% and 3% annually. Elsewhere in California the increase has been even more rapid, at over 3%, peaking at the highest ever numbers in 2007. These trends are about to change, however.

Declining or nearly stable area numbers for the 0 to 24 year-old cohorts suggest that K-12 enrollments and future numbers of high school graduates will likely decline – and that is the case for both Alameda County and for PCCD’s feeder high schools.

Over the past decade, PCCD area high schools have consistently produced about three of every 10 Alameda County high school graduates. Projecting this ratio onto California Department of Finance (DOF) forecasts for Alameda County results in an expected decline in PCCD area graduates that is greater than both Contra Costa and Santa Clara Counties – where high school graduates are expected to “level out” after 2007 – and greater than the state generally.

In a pattern roughly like that of many other – older urban – areas in California, PCCD area high school graduates will peak in 2007 at about 4,200, then decline, through at least 2016, ending at an estimated 3,500 that year (Chart I).

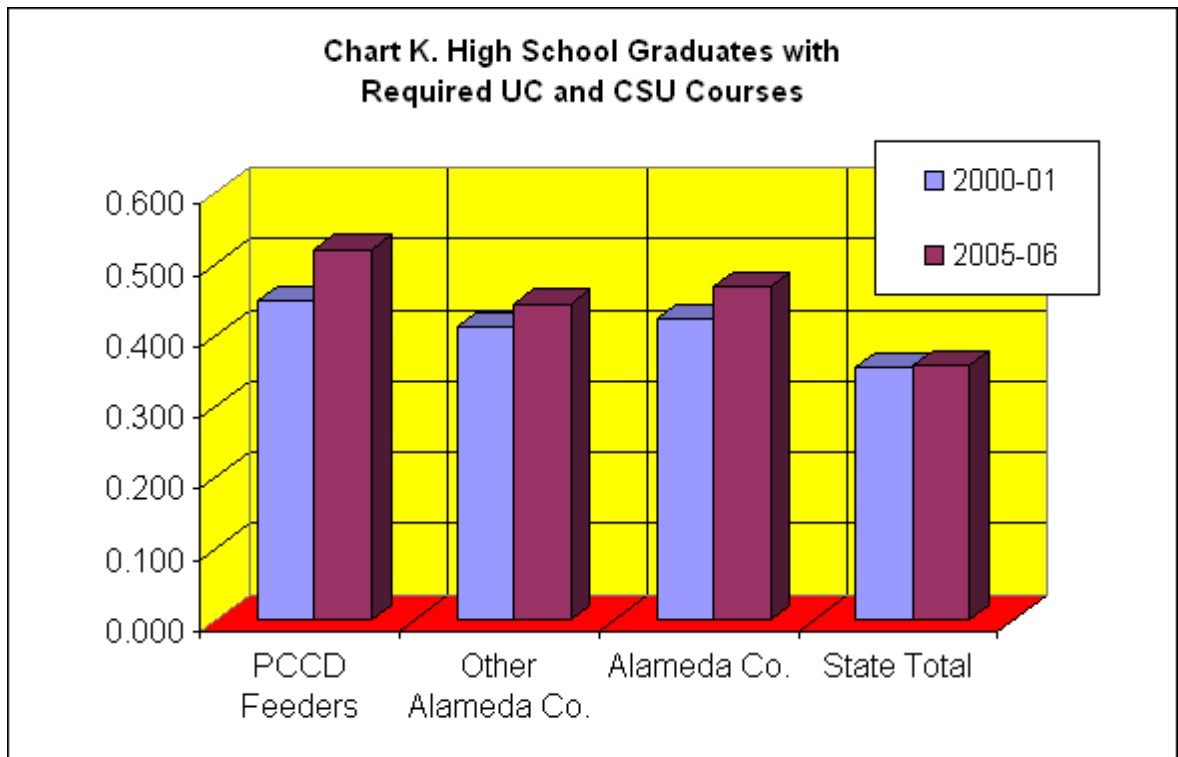
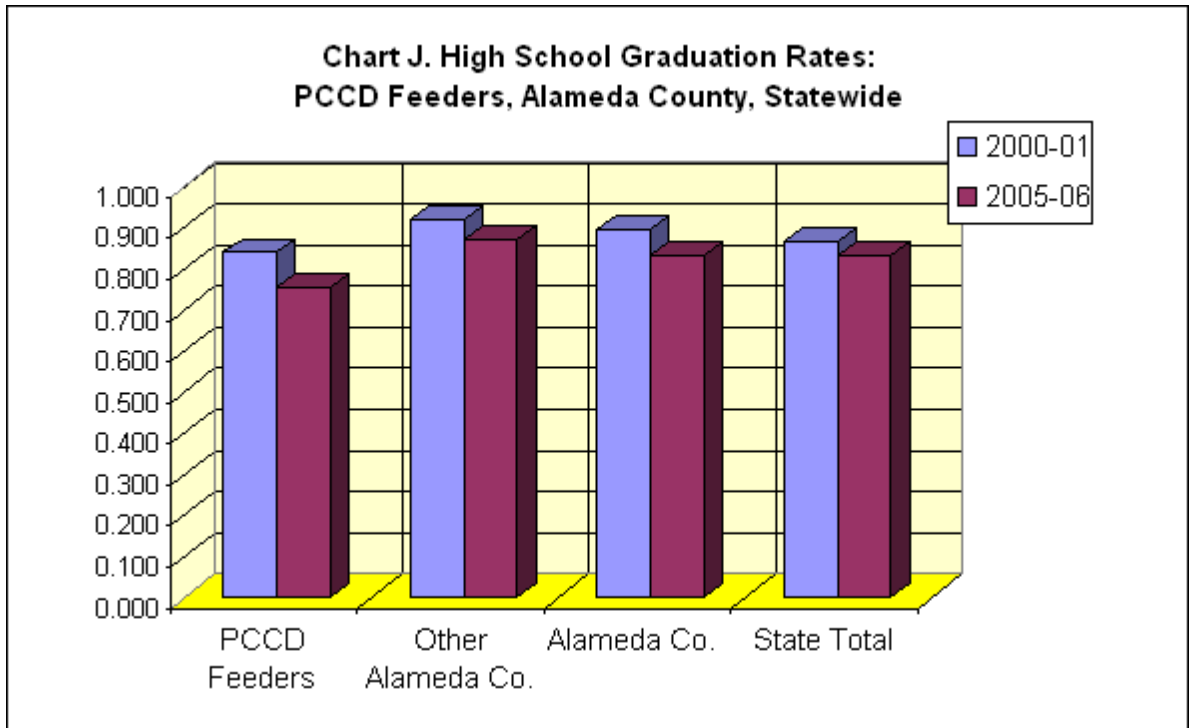
Beyond the 2016 DOF estimates – based on a slight increase in the 0-14 age cohort during 2010-2020 in the PCCD area – there should be a correspondingly slight upturn in the numbers of PCCD feeder high school graduates in the decade following 2020.

Area High School Students: More Drop Outs, but Graduates Better Prepared and More Interested

Given the expected coming decline in area high school graduates, PCCD will need to expand its college-going rates among recent graduates if it is to maintain its transfer program or extend it beyond its current level. While its recent performance in this regard is examined in the *Internal Scan* paper, trends in the preparation and interest of graduates – both factors relevant to PCCD’s performance – are examined below.

Review of recent high school *graduation rates* suggests that PCCD feeder high schools have lower rates at 75% – higher drop-out rates – than other Alameda County high schools (87%) and the state generally, and that these graduation rates have dropped more – 10% more – since 2000-01 than have rates for high schools elsewhere (Chart J and Appendix F). Moreover, rates for the PCCD feeders vary dramatically – from 61% for high schools in the Oakland Unified School District – meaning that two of every five 9th graders do not make it to graduation – to 100% (no drop-outs reported) for the Piedmont City high school. (Rates are defined as the proportion that graduates are of the number of graduates plus drop-outs over the prior four years.)

If the recent five-year decline in PCCD feeder graduation rates were to continue into the future, the decline in graduates estimated by the DOF (displayed in Chart I) will be even more pronounced.



Source: Appendix F.

A measure of preparation and interest, the *ratio of graduates with required UC/CSU courses*, presents a more positive picture for PCCD. Its feeder high schools not only report a ratio – more than half (.52) – that is higher than other schools in the County and far higher than the statewide ratio (.36), but also has increased by 16% in the past five years, a rate far higher than high schools in most other community college districts (Chart K and Appendix F).

Ratios of 12th graders taking the SAT I test and their scores may also be considered as proxies for students' preparation for and interest in postsecondary education. Data compiled by the California Department of Education suggest that SAT test-taking increased in the three years 2003-04 to 2005-06 not only in the PCCD feeder high schools, but also in other Alameda County high schools and (though modestly) across the state (Chart L and Appendix G). PCCD area SAT-taking rates continue to exceed those of other County schools and the state generally by a wide margin – 57% vs. 50% and 41%, respectively.

While SAT-taking increased among students at PCCD feeders in the three years, scores greater than the “standard” (1000 in 2003-04 and 1500 in 2005-06) dropped from 31% to 26%, a level equal to that of other County schools (27%), however, and still far above statewide results of 19% (Chart M).

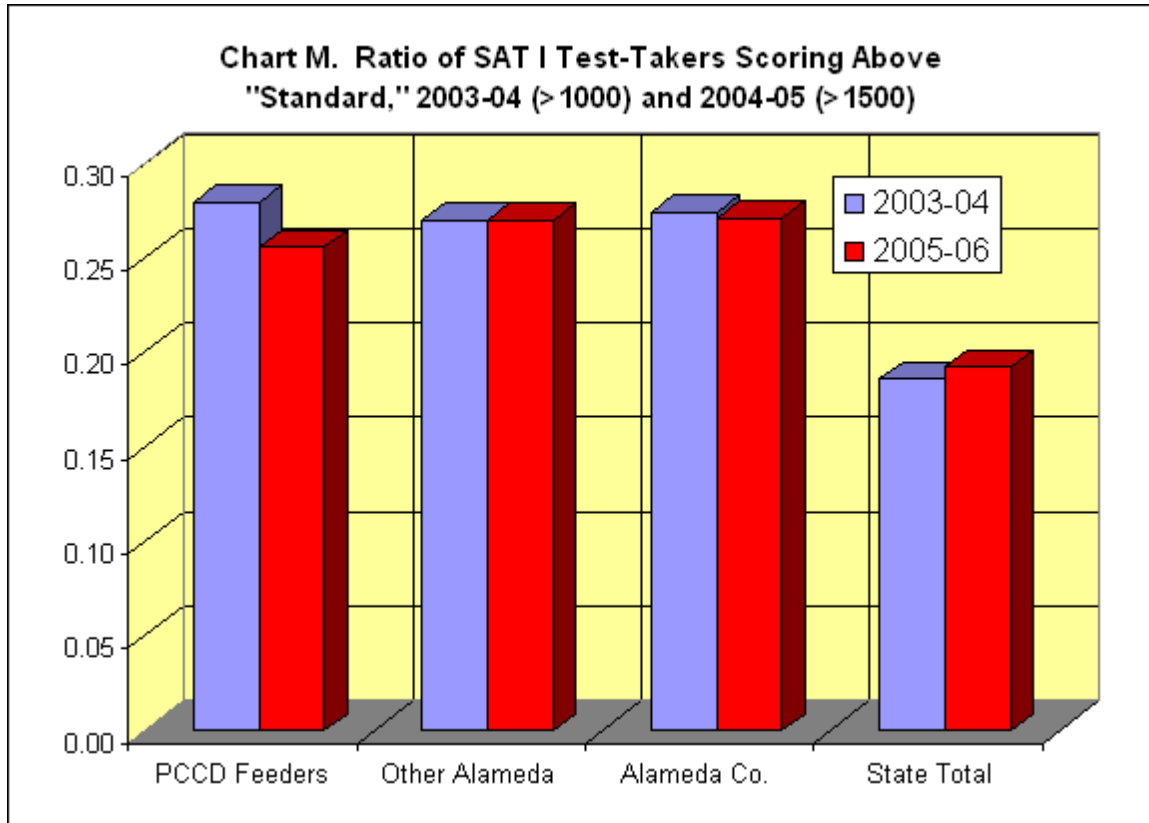
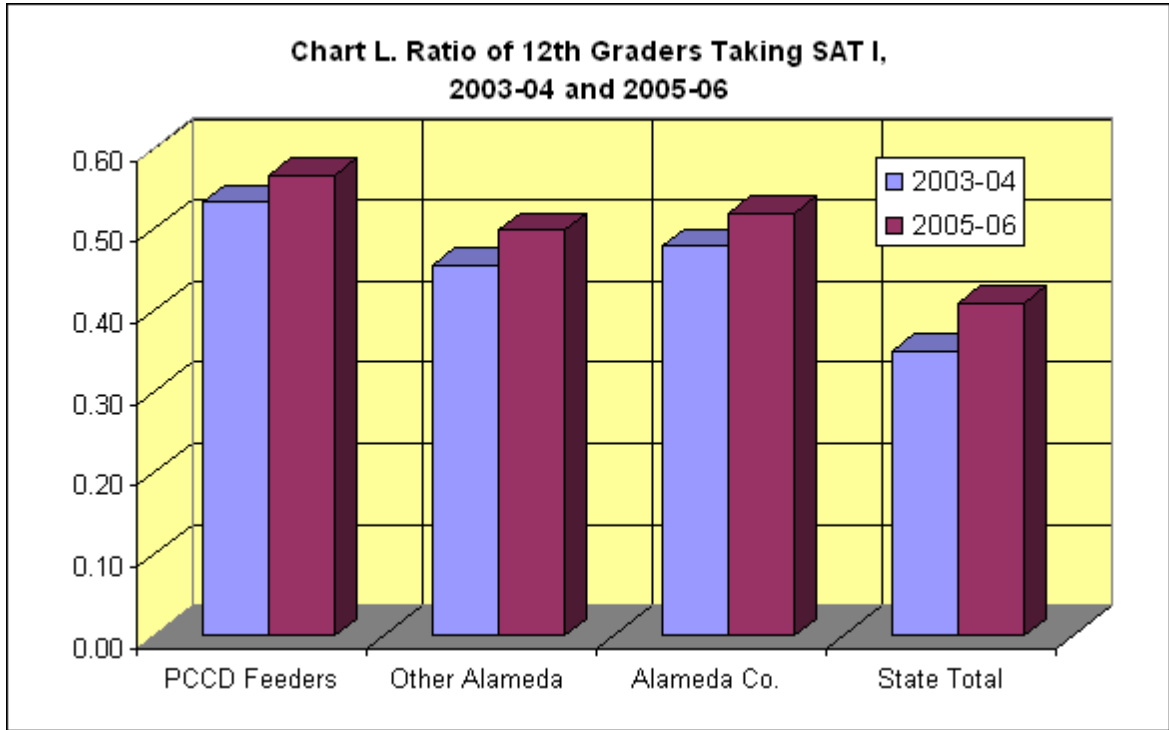
Trends in the general preparation of students entering PCCD colleges such as deficiencies in the areas of basic fundamental learning skills – language, computation and technology – and frequency of students speaking English as a second language (ESL) are covered in the *Internal Scan*.

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 PCCD 's service area region grows rapidly and as local communities become far more multi-cultural.

PCCD 's service area, a portion of the “East Bay – northwest Alameda County – is made up of a number of diverse communities that are changing in distinctly different ways, with different implications for PCCD (see again Chart A). PCCD's area is bordered on the west by the San Francisco Bay, ranging from Albany in the north to Alameda and South Oakland. The district is bordered on the east by the hills, ranging from San Pablo Reservoir and Tilden Regional Park on the north to Upper San Leandro Reservoir, Chabot Regional Park and Lake Chabot on the south.

Information from agencies such as ABAG, area cities, and Alameda County, among others, together with commentary from community focus groups, provides a picture of the area's emerging changes that are relevant to PCCD planning.



Source: Appendix G.

Social and Cultural Change

Area demographic changes are dictating an increased diversity of PCCD's service area culture that will continue as Asian and Hispanic populations grow. Adding to this diversity is a projected gentrification of the downtown Oakland retail corridor. Together these developments suggest that PCCD students will have more (complex) learning styles. And the aging of both population and infrastructure has implications for PCCD marketing and curriculum.

Environment: Climate, Geology, Energy, and Air

PCCD area *climate* can be characterized as having a high pressure cell in the summer that results in cold water temperatures and frequent fog, but negligible precipitation. This high weakens in the winter and virtually all the area's rainfall takes place between November and April. Annual totals vary also by location – from 40 inches in the mountains to 15 inches in the sheltered valleys.

Area *geology* is perhaps best known for its major earthquake faults: the San Andreas in the West Bay, and the North and South Hayward faults that come together east of the Bay Bridge near the Contra Costa County line.

Much is known about where earthquakes are likely to occur – for, say, major faults such as the San Andreas and Hayward – but not when. The region is particularly at risk because of these faults, native soil conditions, and filled marshlands and bay muds, most subject to liquefaction and unable to support structures during earthquakes. All of which underscores the need for continued seismic safety measures – in planning new and building renovation at PCCD sites.

Energy use in California is primarily fossil-fuel based (petroleum, natural gas and coal), and in the East Bay region is no exception. Roughly two-fifths of the area's energy is used by residents, two-fifths by small and medium business, and the remainder by large business/industry and others.

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 waste) to turn turbines, but until new plant capacity is in place, and conservation and alternatives like solar subsidies are undertaken, the other factors will doubtless lead to rolling power outages in the East Bay's future. PCCD efforts at energy efficiency and sustainable building design will help it address these problems.

Pollutants within the East Bay 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 (PM₁₀), sulfur dioxide (SO₂), 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 Bay Area Air Quality Management District (BAAQMD). The district has attained national ozone standards and is working on a strategy to meet California Clean Air Act requirements. Likewise the district has met national standards for particulate matter, though EPA has lowered the standards and will test for the new levels in 2009. The district also reports substantial decreases in toxic air contaminants (TAC) like chlorinated solvents, of which 1,3-butadiene and benzene (primarily from motor vehicles) account for one-half of the average calculated cancer risk. Recent studies, however, show that diesel particulate matter (heaviest around the Port and West Oakland) may pose a greater risk than all other TACs combined.

California legislation, AB 32 (2006), calls for a 25% reduction in the state's carbon dioxide (CO₂) 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 BAAQMD to improve air quality rely on reducing mobile sources.

Transportation

The importance of East Bay transportation to PCCD is highlighted by: (1) variable air quality, (2) increasing cost to students for commuting to and parking at PCCD colleges, (3) training needs and constrained schedules of area individuals who commute daily to and from work, in and out of PCCD's area, and (4) the need for training of workers in the growing "logistics" industry – trucking, shipping, warehousing and distribution – in the East Bay.

The PCCD area contains hundreds of miles of roadways, but only six major routes: I-80, I-880, I-580, and State Routes 13, 24, and 185 (see again Chart A). Area traffic problems are caused by both commuters and by trucking, much of the latter related to the Maritime Port of Oakland. The Port ranks fourth among North American (truck) container ports, despite having little rail capability. Barring rail expansion, growth in international trade means increasing truck traffic, especially along I-880, I-580 and I-80.

Plans for area transportation improvements are underway, both the Metropolitan Transportation Commission (MTC) and the Regional Transportation Initiative (RTI)

coalition advancing plans that combine the several existing modes – streets, freeways, bus, transit, ferries, rail, even bicycles – in ways that, through the use of a ½ cent sales tax for area freeways, and others will attempt to keep up with increasing vehicle-miles expected in the area.

Transportation is seen as a major problem for area students as well as residents. PCCD colleges appear to be relatively closely located, particularly the Colleges of Alameda and Laney. Once commute times are considered, however, including time for parking or time spent with bus transfers or at BART stations (located near Laney and Berkeley City Colleges), transportation is arguably the greatest single cost (apart from the opportunity cost of time spent in class and study) for a student attending one of the PCCD colleges – at over \$3,000 yearly for a full-time equivalent student (FTES). (See the *Internal Scan and Scenarios and Simulations* for this and other aspects of student pricing.)

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 East Bay are unclear, but students (especially those younger) are entering PCCD 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 (and 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 do (will) younger students come to PCCD 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 educational accountability than in reading, studying and learning as among 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*). Most faculty do agree that today's students enroll with ever busier schedules and often with poor study skills. That four of every five new students who are assessed test with less-than-collegiate skills is not new, however.

What seems 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 and likely productive. Discussions with faculty at a number of community colleges reveal this style is common. (The difficulty at PCCD, of course, is that 15-24 year-olds often enroll in the same classes as 25-54 year-olds or 55+ year-olds with BAs, the three 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 PCCD 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 \$90 per barrel and there is concern about capping greenhouse gases (mostly carbon dioxide) that contribute to 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. Debate continues as to the effective environmental relief provided through the manufacture of alternatives like ethanol.

Biotechnology firms often seek employees they describe as “expert laboratory technicians,” individuals who may be trained generally by colleges such as PCCD’s 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.

Numerous other advances relying on *genomics*, the study of an organism’s entire genome, as opposed to the study of the role and function of individual genes. The cloning of animals and replacement of human organs, possibly through use of embryonic stem cells, virtual eugenics, and the use of drugs to create lifestyles, rather than treat illness, increasingly raise moral and ethical questions about authenticity, nature, and the notion of “playing God.”

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 PCCD planning because:

- as the PCCD area economy improves (declines) and individuals in the labor market go to work (need retraining), *PCCD enrollment* falls (rises), other things being equal.
- development of the regional PCCD area economy dictates labor market needs and the kinds of available jobs, which in turn suggest *PCCD curriculum* change.
- as California 's economy improves (declines), state general and local property taxes and *PCCD 's funding* rise (falls), 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, PCCD 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 N). This gradual slowing in growth through 2007 in most countries is expected to accelerate in 2008 due to subprime (loosely-secured) mortgage problems, financial disruption, decline in housing and construction, and high energy prices.

Chart N
Annual Price-Adjusted Rate of GDP Change

	2004	2005	2006	2007	2008	2009
U.S.	3.7%	3.6%	3.1%	2.5%	1.8%	2.6%
Euro area	1.3%	1.3%	3.3%	2.6%	1.8%	2.0%
Canada	3.3%	2.9%	2.3%	2.4%	1.9%	2.5%
Mexico	2.4%	3.3%	4.3%	3.2%	2.7%	3.4%
Japan	1.3%	2.4%	2.3%	2.3%	1.4%	1.9%
China				10.3%	10.1%	9.6%

Source: Economist, 2008.

The federal debt, continuing Afghanistan war and Iraq occupation, along with relief efforts are having a short-term impact on the federal budget which could eventually have an impact on federal financial support for PCCD. And California's economy has not yet been impacted – indeed, revenues are down and the state's on-going structural budget deficit has tripled in less than one year (see below) – and state aid to PCCD and other community colleges affected. Moreover, employment and prices in the East Bay are impacted as well. Given the present state of uncertainty, PCCD staff may want to consider alternative external conditions as it goes about its planning.

The Nation's Long-Term Picture

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 current (unexpected) mortgage and financial crisis also could be considered as such a shock.

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 decreases in the federal funds (interest) rate – the bank overnight borrowing rate – are designed to spur the economy in the short-term. But 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 interest rates that lead 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 was larger than expected in the face of a softening in real estate and higher-than-expected gas prices. However, by mid-2007 the mortgage/financial crisis had hit with estimated personal income growth down one percentage-point and forecast by California Department of Finance (DOF) to be down again in 2008, along with an increase in the state’s unemployment to 5.7% (Chart O). Higher energy prices seemingly haven’t yet affected consumer spending on other goods, but may eventually prove to be a drag, given the unsettled nature of world oil markets.

Chart O				
<i>Annual Changes in California Economic Indicators</i>				
		<i>CPI</i>	<i>Unemp.</i>	<i>Personal</i>
			<i>% Rate</i>	<i>Income</i>
2005		4.4%	5.5%	6.3%
2006	<i>Actual</i>	3.5%	5.6%	6.5%
2007	<i>Est.</i>	3.3%	5.3%	5.6%
2008	<i>Forecast</i>	2.6%	5.7%	4.8%
2009		2.7%	5.6%	5.2%
2010		2.7%		
2011		2.6%		

Sources: CA LAO(2008), DOF (2008), McIntyre (2008).

Consistent with the “slower growth ahead” forecasts for the U.S., both the (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 are below those of the U.S. in the DOF’s forecast, slowing through 2008, but then increasing to 2010. Declining home values will produce a wealth effect that dampens consumer spending. Once the housing downturn subsides, 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 growth.

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

PCCD AREA ECONOMICS

Because of the “dot.com implosion”, the Bay Area experienced one of the worst regional recessions in U.S. history at the beginning of this decade. But information technology (IT) continues albeit at a slower rate and in a somewhat different form – somewhat less e-commerce.

With recovery, the East Bay has grown, but has experienced a rise in housing prices. According to the 2007 study by McKenzie & Co., the Oakland metropolitan area, while growing by 1% yearly between 2001 and 2006 (while the rest of the Bay Area decreased by -1.4% and the U.S. grew by just 0.6%) still has lost traditional core industries like manufacturing and transportation (the Port of Oakland “constrained”), and area healthcare not keeping up with an aging population and new treatment techniques.

Reviewing the area’s challenges and opportunities, McKenzie recommends initiatives to:

- Strengthen Oakland’s *healthcare* industry, while leveraging the Bay Area’s strengths in *biotechnology* – promoting curriculum partnerships (colleges with businesses), a “life sciences cluster.”
- Enhance activity around Oakland’s Maritime Port (for Asian trade) and as a *logistics* hub.
- Revitalize downtown Oakland with a safe *retail* corridor.
- Nourish the growth of small, but emerging “niche” sectors:
 - *Green* industry
 - *Arts, design, and digital media*
 - *Specialty food manufacturing*

The McKenzie Report notes (1) the role of Oakland-area community colleges to “align their offerings with Oakland jobs, and particularly, with jobs in its niche industries,” and (2) the federal support for job training from the Workforce Investment Act (WIA, 1998).

Given area economic conditions and recommendations by McKenzie and others (Mayor Dellums' volunteer Workforce Development Task Force), the *Internal Scan* explores the role(s) that PCCD can assume.

The current economic shock has slowed growth in consumer spending and the area – in this case measured by the Oakland-Fremont-Hayward Metropolitan Statistical Area (MSA) – has experienced rising unemployment since 2006 in about the same fashion as the rest of California (and both greater than the unemployment increase across the U.S.):

Unemployment Rates		
(Not Seasonally Adjusted)		
	Dec-06	Dec-07
Regional*	3.9%	5.0%
California	4.6%	5.9%
U.S.	4.3%	4.8%

*Oakland-Fremont-Hayward MSA.
Source: CA EDD (2008).

While technically not yet a recession (defined as two consecutive quarters of decline in GDP), the regional economy has obviously slowed.

That said, work by Beacon Economics for the East Bay Regional Forecast Conference (in September 2007) concludes that solid growth is expected "...to resume locally and nationally by mid-2009, and 2010 will be the best year yet for the 'sunny side of the Bay'" – a forecast that is possibly a bit bullish, but generally consistent with those by the DOF and LAO.

PCCD AREA JOBS

The East Bay industry and employment profile (here measured by Alameda and Contra Costa counties) contrasts with California in the changing balance of firms and jobs, during the current decade (Chart P). Compared to the statewide pattern in 2004, EDD estimates that East Bay Area jobs were concentrated *more* in

- Construction
- Professional, Science and Technical
- Health and social Services like Nursing, residential care, and social assistance
- Logistics (transportation, warehousing and distribution)
- Finance and Insurance
- State and Local Government

**Chart P
INDUSTRY EMPLOYMENT, 2004-14**

	Alameda & Contra Costa Co's				CALIFORNIA				RCCD Growth xCA
	2004	%	2004-14 Chg.	%Chg	2004 (000s)	%	2004-14 Chg.	%Chg	
Total Employment	1,117,600	100%	96,900	9%	16,377	100%	2,637	16%	0.5
Self Employment	91,600	8%	1,000	1%	1,308	8%	91	7%	0.2
Unpaid Family	800	0%	-100	-13%	24	0%	-4	-15%	0.8
Total Farm	1,500	0%	0	0%	369	2%	-13	-4%	0.0
Total Nonfarm	1,023,700	92%	96,000	9%	14,530	89%	2,569	18%	0.5
Natural Res.& Mining	1,200	0%	0	0%	23	0%	1	4%	0.0
Construction	69,800	6%	7,600	11%	850	5%	163	19%	0.6
Durable Manufacture ¹	62,300	6%	2,800	4%	976	6%	26	3%	1.7
Nondurable Manufac.	35,900	3%	-1,000	-3%	557	3%	3	1%	-4.7
Wholesale Trade	49,200	4%	1,500	3%	655	4%	112	17%	0.2
Retail Trade	110,500	10%	10,400	9%	1,618	10%	276	17%	0.6
Utilities	2,900	0%	100	3%	56	0%	3	5%	0.7
Logistics (Tr&Wh)	31,200	3%	400	1%	427	3%	67	16%	0.1
Information	31,300	3%	700	2%	482	3%	87	18%	0.1
Finance and Ins.	49,500	4%	4,200	8%	626	4%	76	12%	0.7
Real Estate,Rnt/Lse	18,100	2%	2,200	12%	276	2%	34	12%	1.0
Prof, Sci, & Technical ²	70,200	6%	16,500	24%	911	6%	243	27%	0.9
Firm Management	22,100	2%	400	2%	227	1%	37	16%	0.1
Business Support	55,400	5%	7,900	14%	948	6%	318	34%	0.4
Private Education	18,300	2%	3,100	17%	263	2%	74	28%	0.6
State Education	25,800	2%	700	3%	207	1%	49	24%	0.1
Local Education	58,400	5%	4,100	7%	935	6%	195	21%	0.3
Health & Social ³	98,900	9%	14,800	15%	1,297	8%	317	24%	0.6
Arts/Entertainment ⁴	14,200	1%	2,800	20%	237	1%	54	23%	0.9
Hospitality & Food ⁵	66,400	6%	10,300	16%	1,202	7%	218	18%	0.9
Other Services ⁶	36,600	3%	5,300	14%	504	3%	84	17%	0.9
Federal Gov	17,300	2%	-700	-4%	251	2%	9	4%	-1.2
State Gov	21,300	2%	800	4%	256	2%	14	5%	0.7
Local Gov	56,700	5%	1,000	2%	747	5%	109	15%	0.1

Source: EDD (2007).

¹Primary metals manufg., communications and transportation equipment

²Architects, engineering, computer systems design,

³Nursing, residential care, social assistance

⁴Amusement, gambling, performing arts, sports

⁵Food services

⁶Repair, maintenance

and *less* in

- Hospitality and food
- Manufacturing
- Local education
- Business support

Between 2004 and 2014, EDD expects that the rate of PCCD area industry-employment *growth* will be strongest, relative to California, in the areas of:

- Durable manufacturing
- Professional, Science and Technical
- Arts and Entertainment
- Hospitality and food
- Repair and Maintenance Services
- Finance and insurance

While the East Bay's unemployment rate has risen during the past year from 3.7% to 5.0%, it is still well below the California rate of 5.9%, both figures marginally higher than what most economists would call "full employment."

California's job growth of 1.6% per year is nearly twice that of the Alameda-Contra Costa County MSA rate of 0.9% (Chart Q). Because of this slower growth most area job openings – 73% - are to replace workers leaving existing jobs, rather than to fill new jobs. This contrasts with the statewide pattern where 59% of openings are replacements.

Chart Q				
JOBS, CALIFORNIA AND THE ALAMEDA/CONTRA COSTA METROPOLITAN STATISTICAL AREA, 2004-2014				
	California		A,CC MSA	
2004	16,376,500		1,117,600	
2014	19,013,700		1,214,500	
New Jobs	2,637,200		96,900	
Percent Change	16.1%		8.7%	
Annual Average				
New Jobs	263,720	41%	9,690	27%
Replacements	385,970	59%	25,990	73%
Total Openings	649,690	100%	35,685	100%
Average Hourly Wage	\$16.14		\$19.28	

Source: CA EDD (2007).

In another contrast to statewide employment, PCCD area jobs paid an average of \$19 per hour in 2005, nearly one-fifth greater than the California average of \$16. This is due both to a greater proportion of higher-skilled jobs in the East Bay (than in California generally) and to higher wages for similar jobs.

Like elsewhere in California, nearly half of all East Bay 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 9,690 annual job openings this decade by industry sector (see again Chart P), we find:

- Professional, science and technical trade
- Health and social services
- Retail trade
- Hospitality and food

with the most openings, followed by

- Business support
- Construction
- Repair and maintenance services
- Finance and insurance

For the next step of determining those job skills and knowledge clusters most in demand – for potential PCCD 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 PCCD can productively train for one-third of the area MSA's demand. (See Chart R.)

At the baccalaureate level, area demand is greatest for

- General and operating managers
- Engineers (computer, software, and civil)
- Elementary and secondary school teachers
- Accountants and auditors

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

- First Line Supervisors
- Registered nurses
- Carpenters and other construction workers

Chart R
PCCD "SHARE" OF JOBS WITH MOST OPENINGS, 2004-14
ALAMEDA AND CONTRA COSTA COUNTIES

	<i>Average Annual Openings*</i>	<i>Median Hourly Wages**</i>	<i>Approx. CA Median Hrly Wage</i>
Requiring Baccalaureate Degree			
General and Operations Managers	164	\$50	
Elementary School Teachers, ExSpecEd	118	na	
Computer Software Engineers, Apps	113	\$41	
Accountants and Auditors	98	\$29	
Secondary School Teachers, ExSpecVocEduc	78	na	
Civil Engineers	60	\$36	
Property, Real Estate, and Association Mgrs	50	\$20	
Computer Software Engineers, SystSoftware	50	\$46	
Requiring Postsecondary Education			
			@\$20
Registered Nurses	232	\$40	
Carpenters	190	\$26	
Customer Service Representatives	148	\$17	
Executive Secretaries/Admin.Assistants	143	\$21	
Sales Representatives, Wholesale	116	\$27	
Bookkeeping/Accounting/Auditing Clerks	97	\$18	
Teacher Assistants	95	na	
Truck Drivers, Heavy and Tractor-Trailer	87	\$20	
Automotive Techs and Mechanics	87	\$20	
Cooks, Restaurant	86	\$11	
Maintenance and Repair Workers, General	80	\$20	
Nursing Aides, Orderlies, and Attendants	74	\$13	
Child Care Workers	71	\$11	
Home Health Aides	68	\$10	
Police and Sheriff's Patrol Officers	53	\$35	
First-Line Supervisors/Office	92	\$24	
First-Line Supervisors/Retail	84	\$17	
First-Line Supervisors/Food	67	\$13	
First-Line Supervisors/Construction	63	\$35	
Total, First-Line Supervisors in High Demand	306	\$22	
Less Than Postsecondary Education			
			@\$10

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

*Openings for Alameda and Contra Costa Counties, 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.

- Customer service representatives
- Executive Secretaries and administrative assistants
- Sales representatives, wholesale
- Truck drivers and other logistics workers
- Bookkeepers and accountants
- Teaching assistants in elementary and secondary schools
- Automotive and Diesel Mechanics

EDD estimates that over 400 job openings per year are expected in PCCD 's service area for the sector of Business, including *managers and operators*, along with *accountants, auditors, and bookkeepers* (see again Chart R). Most these jobs require some postsecondary education, many a baccalaureate degree. Two of every five openings are in new jobs, the other three are vacancies in existing jobs.

Given modest area growth in local education, the high demand of nearly 200 annual openings for K-12 *teachers* is mostly to replace retirees – all jobs requiring a baccalaureate with training for credentials. Also high is the demand for nearly 100 *teaching assistants* annually – a different (older) niche, requiring a different level of (short-term) training.

Health support and healthcare grow at twice the PCCD service area average of 0.9% annually – jobs requiring some postsecondary education, but less than a baccalaureate degree. About half of the estimated annual openings in Health will be in new jobs, the rest replacements. The skills cluster most in demand, *Registered Nurses*, counts 232 openings each year (Chart R). The relatively high hourly wage of \$40 (in 2005) for RNs suggests their scarcity. Another 140 annual job openings in the area are expected for other health skills – possibly requiring training at the level offered by PCCD – mostly for *dental hygienists and medical assistants, pharmacy and radiological technicians 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 PCCD 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 300+ 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 PCCD service area are estimated at 150. 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 information technology, 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*, estimated area job demand, is highest among

	<i>Annual area job openings</i>
Carpenters	190
Equipment operators	41
Electricians	37
Plumbers	35
Cement masons and concrete finishers	30
Drywall and ceiling tile installers	20
Iron and steel workers	12

positions where pay averages between \$24 and \$30 per hour currently.

The demand for logistics workers also is substantial, highlighted by *truckers*, drivers of heavy, long-haul trucks for whom there are nearly 87 openings per year in the PCCD service area, many involved in traffic to and from the Port of Oakland. Other logistics worker openings – in warehousing, inventory, and other activities – are more difficult to individually identify in the EDD data, but number about three dozen yearly.

Another relatively high demand area is 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. Openings for over 100 such workers – welders, electronics, and power plant – are estimated for the PCCD’s area, all requiring some training in these skills beyond secondary school. Moreover, as area traffic grows and the electronics of automobiles and airplanes advance, *auto, diesel and airframe mechanics* increasingly require highly-skilled electrical and mechanical training beyond high school level – with nearly 200 annual job openings in the PCCD service area.

A variety of other job skills, not well identified in the EDD projections for PCCD’s area, are in sectors such as *green and environmental technologies* and *community services* for public agencies, non-profits and private firms. (More on this in the *Internal Scan*.) Appendix H summarizes area job demand by skill type, and compares that to PCCD program production, where appropriate. This also is analyzed in the *Internal Scan*.

PUBLIC POLICY

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

Of concern to PCCD are possible changes to *federal* policies regarding the funding of community colleges and student financial aid what with the currently-large deficit, continuing war in Afghanistan, and occupation of Iraq.

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 – was once again extended in 2007 to Spring 2008, but without any significant change.

The President signed the 2007-08 omnibus federal spending bill on January 18, 2008 reducing labor-HHS-education programs by -1.7% overall. Among student aid programs, the Pell Grant maximum increases from \$4,310 to \$4,731; FWS, TRIO and GEAR Up are level-funded; and SEOGs and LEAPs are cut. Institutional workforce training programs like Perkins and WIA also are cut, by about the 1.7% average.

Further cuts in domestic spending are expected in the President's budget proposal for 2008-09, but the actual appropriations outcome is subject to the results of the November 2008 election. With the Pentagon's proposed budget for 2008-09, military spending will have reached it's highest level (with adjustment for inflation) since World War II.

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 once the HEA is reauthorized.

A slowing economy means that *state* fiscal policies will be increasingly restrictive, leading to more competition among the state's community colleges and other agencies 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.

Passage of Proposition 92 (2008) 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.

Shortfalls in the state budget affected community colleges, and PCCD in particular, in 2002 when significant budget cutbacks were made and in 2003 and 2004 when student fees were increased dramatically. Otherwise, colleges like PCCD have experienced relatively stable budget increases since 2000, with 2006-07 arguably one of the largest in history.

Policy changes in new funding legislation SB 361 (2006) 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 \$2.5 million to PCCD's base revenue guarantee based on its number of colleges along – an increase of nearly 3% much like the overall statewide increase of 3%.

After thirty years of unchanged and for some fast-growing districts (like PCCD) inequitable *funding policies*, the SB 361 changes beginning 2006-07 appear to favor potentially-growing districts that are possibly engaging in non-credit instruction (like PCCD). While improving PCCD'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 was reduced from \$26 per unit to \$20 per unit, beginning 2007. This significant change reduced by \$90 or 10% the direct costs facing a PCCD full-time equivalent student (FTES), and because of students' significant price-elasticity (see paper on *Scenarios and Simulations*) should push PCCD 2007-08 FTES to higher levels than would otherwise have been the case. Fee increases at UC and CSU and early admissions at CSU also add to PCCD enrollments.

The current economic slowdown and sagging state General Fund revenues have increased the expected budget deficit from its structural level of \$5 billion to \$14.5 billion in less than a year. To solve this, the Governor proposes to

- Issue more deficit financing bonds and slower repayment
- Accrue (early) 2009-10 revenues
- Reduce costs

The latter (cost reduction) includes suspending Proposition 98 to save \$4 billion and, therefore, reducing community college funding by \$40 million (-0.7%) in 2007-08 and essentially level-funding the colleges in 2008-09 by:

- +1% increase in general aid: made up of workload increases and across-the-board decrease and
- -7% reduction in categorical aid

Community college student fees would remain at \$20 per unit in the face of proposed increases by UC and CSU to compensate for their budget decreases.

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 PCCD. As specific needs are identified, facilities and equipment at PCCD colleges also will be funded from recent bond measures authorized by PCCD voters.

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 operating budget shortfalls adds to this, but given the structural budget deficit, the LAO is cautioning against the Governor's plans to repay debt early.

Besides on-going accreditation issues, two efforts are also significant for PCCD:

- 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), that is designed 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 PCCD 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.

Active Learning Spaces

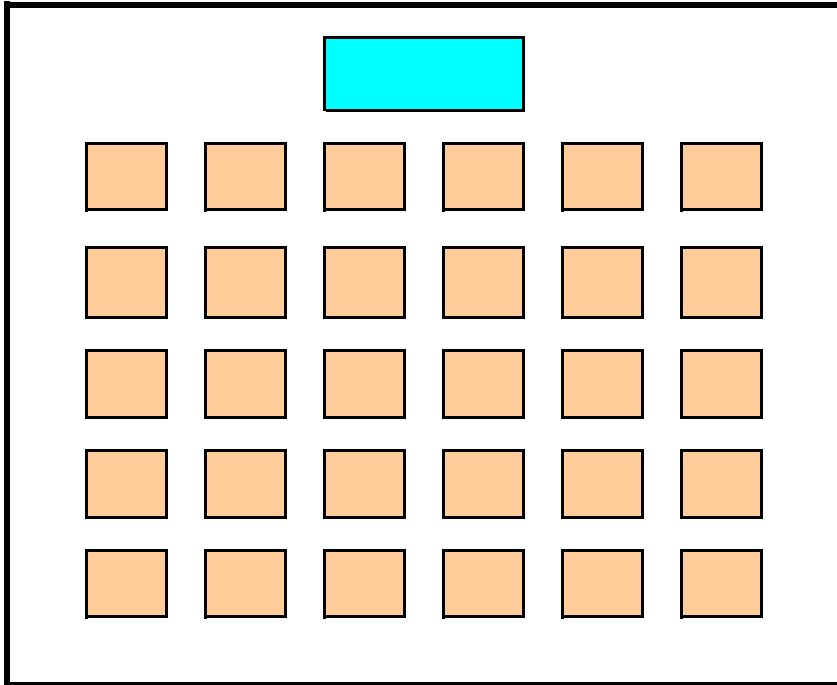
Ramifications for the configuration and equipping of such “active learning” spaces are significant. Such spaces replace the old tablet-arm chair lecture room where students sit in rows and passively listen, for the most part, to a faculty lecture. Work at community colleges similar in function to PCCD 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

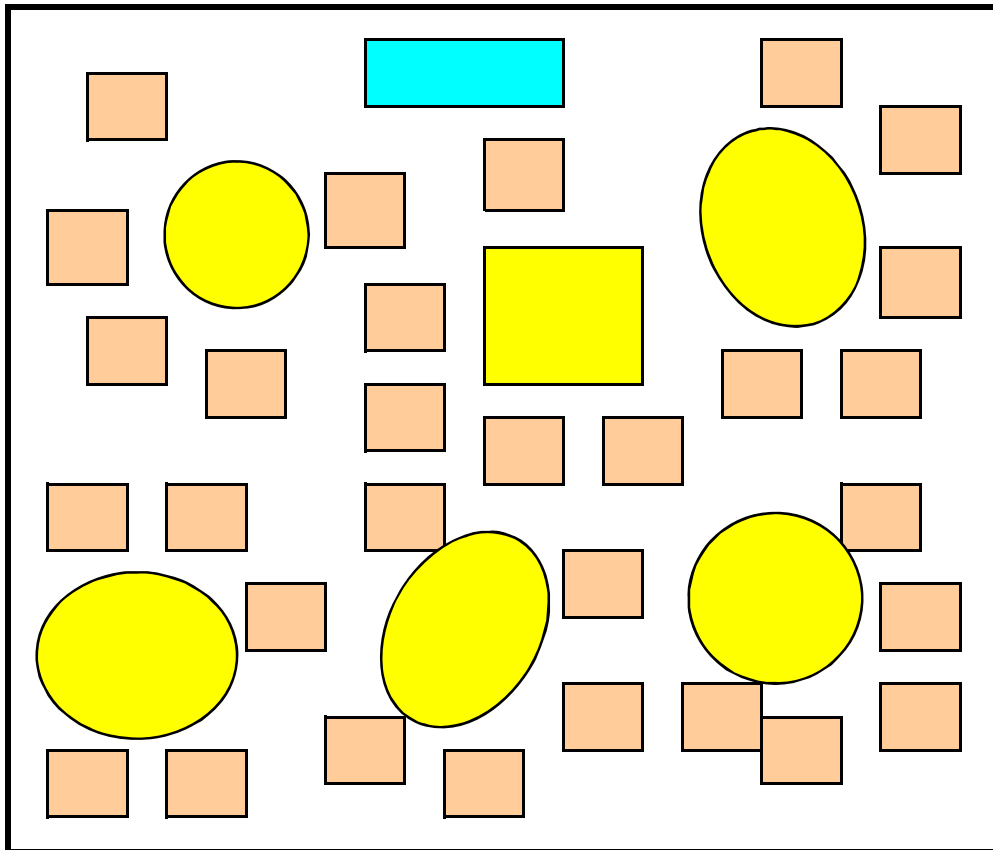
The area – as measured in assignable square feet per station (ASF) – required for the “learning space” is greater than the traditional lecture class chair provision (in most cases, by 50%), but less than the area needed for traditional, fixed stations of, say, a chemistry lab – as suggested in Chart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

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.

Chart S: COMPARING LECTURE TO ACTIVE LEARNING SPACES



LECTURE ROOM



ACTIVE LEARNING ROOM

Other Trends

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

- While the number area high school graduates is peaking and will decline well beyond the end of this decade (see above), the prior preparation of *younger PCCD students* is problematic even though California high school seniors are required to pass an exit exam. In addition, those entering PCCD are more often likely to be speaking English as a second language.
- *University of California and California State University policies* on fees, admissions and remediation will likely continue to impact the number and kind of future PCCD enrollments. Recent budget proposals and agreements suggest that the universities' admissions are likely to become increasingly restrictive and fees relatively higher, with the result that relatively more young students – who complete high school – may attend PCCD .

Competitors and Collaborators

Activities of *other postsecondary education providers* (competitors or collaborators), located in the PCCD service area, are important to PCCD 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 PCCD's district area are Contra Costa to the north and east, San Francisco to the west, and Chabot-Las Positas to the south (see again Chart A). Typically, PCCD enrolls students from all three districts – especially along its northern and southern borders. (See also Internal Scan for these enrollment patterns.)

PCCD colleges are major transfer feeders to California State University East Bay and San Francisco, UC Berkeley, Mills College 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 East Bay.

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

- Closer to home (well known and inviting)
- 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 competitor trade schools suggest that they (trade schools) may lack quality. Community members see PCCD 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.

Adding to this situation is the declining public support for vocational education in K-12 as it is forced toward college-prep work and more emphasis on standardized testing. K-12 representatives feel they've had strong relationships with PCCD, highlighted by the "middle college" efforts. Despite these positive comments, focus group participants call upon PCCD to partner more locally and specifically talk about the need to "revive" apprentice programs and to add and expand PCCD-supported internships for students working at jobs throughout the PCCD service area.

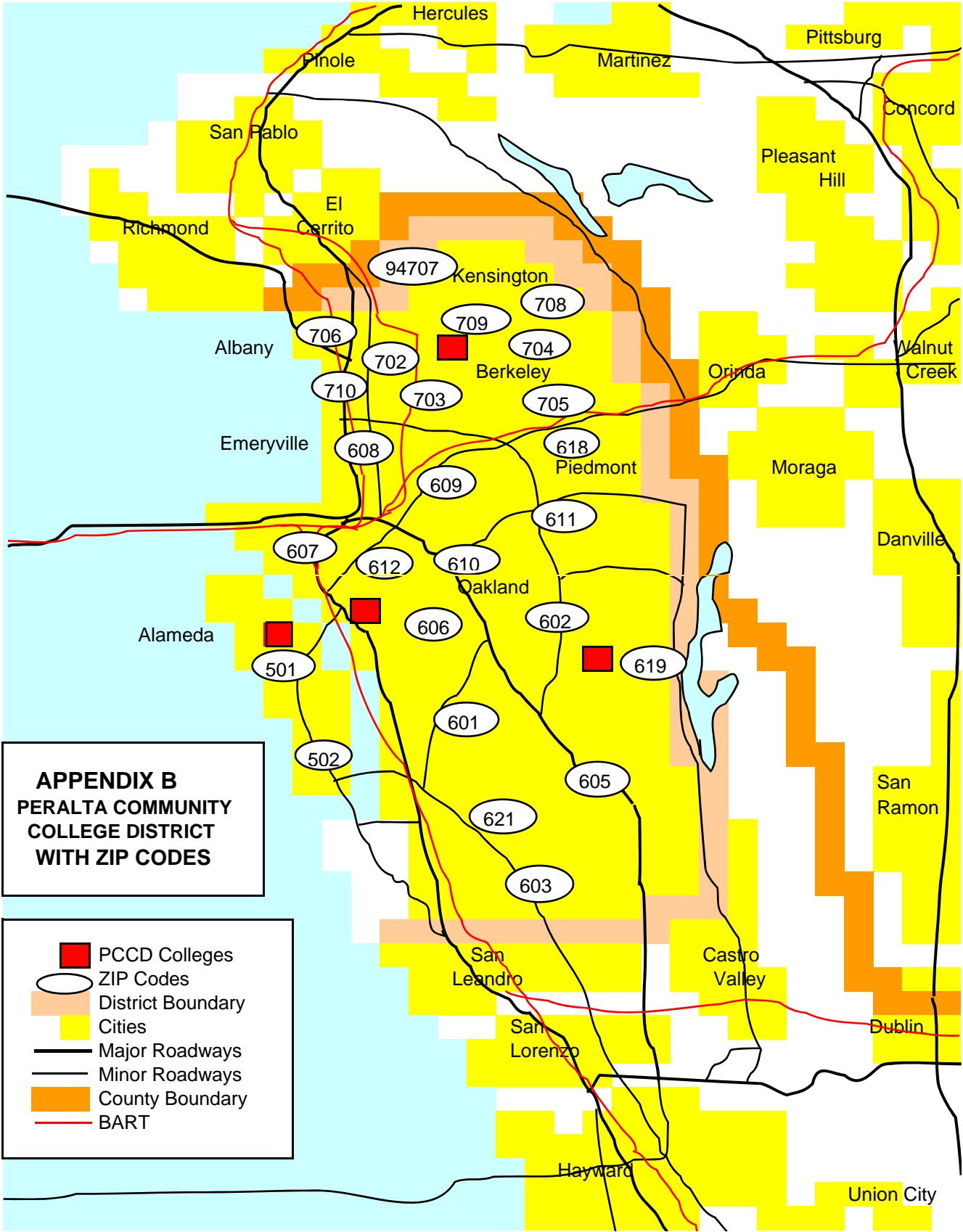
Middle college efforts, involving local high school students at PCCD are viewed by the community members as helpful, though noting that high school students in a program at Merritt didn't appear ready for the college atmosphere. This suggests that expansion of the Middle College may need to emphasize careful distribution of students and programs at both the high school and college campuses.

APPENDICES

APPENDIX A. PCCD DEMOGRAPHICS BY AREA

ZIP	Pop	wJobs*	Hh	P/Hh	J/Hh	MedHHIn	15-24	25-54	55+	Black	Asian	Hispanic
Albany 94706	14785	8529	6516	2.3	1.3	\$64,903	1766 12%	6707 45%	3742 25%	580 4%	3908 26%	1183 8%
BerkeleyC/UC 94704	23471	10738	9617	2.4	1.1	\$15,967	4989 21%	13102 56%	1682 7%	803 3%	9116 39%	2846 12%
Berkeley East	48004	22186	21719	2.2	1.0	\$78,465	4934 10%	21389 45%	14514 30%	1489 3%	7397 15%	2679 6%
94705	14050	6943	6545	2.1	1.1	\$65,148	1400 10%	6554 47%	3931 28%	696 5%	1822 13%	894 6%
Kensington 94707	11840	3166	4979	2.4	0.6	\$103,087	1145 10%	4459 38%	4424 37%	268 2%	1384 12%	591 5%
Kensington 94708	11366	6044	5056	2.2	1.2	\$106,126	1003 9%	4341 38%	4448 39%	234 2%	1346 12%	480 4%
94709	10748	6033	5139	2.1	1.2	\$39,497	1386 13%	6035 56%	1711 16%	291 3%	2845 26%	714 7%
Berkeley West	59229	31955	26862	2.2	1.2	\$40,898	6333 11%	29284 49%	12949 22%	11300 19%	8621 15%	7786 13%
94702	15174	7811	6998	2.2	1.1	\$42,059	1599 11%	7260 48%	3584 24%	4348 29%	1956 13%	2344 15%
94703	19120	10970	8681	2.2	1.3	\$44,108	2140 11%	9691 51%	3800 20%	3994 21%	2968 16%	2357 12%
94710	9291	3720	3738	2.5	1.0	\$36,528	1386 15%	4674 50%	1473 16%	1904 20%	1983 21%	2207 24%
Piedmont 94618	15644	9454	7445	2.1	1.3	\$86,023	1208 8%	7659 49%	4092 26%	1054 7%	1714 11%	878 6%
Oakland NE	92821	54225	43391	2.1	1.2	\$60,396	8859 10%	43690 47%	24304 26%	15010 16%	17849 19%	8353 9%
Piedmont 94611	36037	20925	17072	2.1	1.2	\$83,125	3414 9%	16223 45%	10497 29%	3242 9%	5113 14%	2090 6%
94610	28351	18858	15080	1.9	1.3	\$43,381	2203 8%	14670 52%	6876 24%	6227 22%	5018 18%	2292 8%
94602	28433	14442	11239	2.5	1.3	\$54,682	3242 11%	12797 45%	6931 24%	5541 19%	7718 27%	3971 14%
Emeryville/Ok 94608	23987	11825	11116	2.2	1.1	\$38,722	2827 12%	11592 48%	4997 21%	11132 46%	3875 16%	2806 12%
Oakland NW	97546	41973	40088	2.4	1.0	\$28,462	11996 12%	45910 47%	20185 21%	32081 33%	31318 32%	17294 18%
94609	20722	11100	9461	2.2	1.2	\$38,255	2196 11%	10633 51%	3857 19%	8393 41%	2160 10%	2348 11%
LC 94607	20945	7221	7802	2.7	0.9	\$20,338	2829 14%	8823 42%	5048 24%	9846 47%	6695 32%	3048 15%
94612	12674	4979	7082	1.8	0.7	\$20,929	1058 8%	6117 48%	3534 28%	4750 37%	3392 27%	1742 14%
94606	43205	18673	15743	2.7	1.2	\$34,324	5913 14%	20337 47%	7746 18%	9092 21%	19071 44%	10156 24%
Alameda	73199	45086	30441	2.4	1.5	\$60,853	8422 12%	32906 45%	18766 26%	4360 6%	22091 30%	7512 10%
COA 94501	59060	22193	25088	2.4	0.9	\$52,473	6708 11%	27181 46%	14572 25%	4016 7%	16256 28%	6726 11%
94502	14139	22893	5353	2.6	4.3	\$102,751	1714 12%	5725 40%	4194 30%	344 2%	5835 41%	786 6%
Oakland SE	65568	29540	23947	2.7	1.2	\$49,167	8862 14%	27664 42%	15308 23%	29828 45%	9111 14%	12284 19%
94605	40638	17815	14734	2.8	1.2	\$42,485	5751 14%	16781 41%	9266 23%	22659 56%	2955 7%	8149 20%
MC 94619	24930	11725	9213	2.7	1.3	\$55,848	3111 12%	10883 44%	6042 24%	7169 29%	6156 25%	4135 17%
Oakland SW	113353	37077	32750	3.5	1.1	\$33,655	18943 17%	47896 42%	16895 15%	40805 36%	13585 12%	57864 51%
94601	54218	18295	15242	3.6	1.2	\$35,840	8717 16%	23720 44%	8067 15%	12131 22%	10529 19%	29798 55%
94621	31053	9101	9325	3.3	1.0	\$31,470	5460 18%	12681 41%	4505 15%	14291 46%	1974 6%	15328 49%
94603	28082	9681	8183	3.4	1.2	\$34,917	4766 17%	11495 41%	4323 15%	14383 51%	1082 4%	12738 45%
PCCD Totals	604136	291850	244275	2.5	1.2	\$54,154	74150 12%	274697 45%	135752 22%	147639 24%	119469 20%	118639 20%

*Data for persons with jobs are for 2005, from ABAG (2007); all other data are for 2006, from Geolytics, Inc. (2007).



**APPENDIX B
PERALTA COMMUNITY
COLLEGE DISTRICT
WITH ZIP CODES**

- PCCD Colleges
- ZIP Codes
- District Boundary
- Cities
- Major Roadways
- Minor Roadways
- County Boundary
- BART

APPENDIX C. 15+ POPULATION IN PCCD AND ADJACENT COMMUNITIES

	1990	%yrch	2000	%yrch	2006	%yrch	2011
94564 CA, PINOLE	47484	-7.2%	13289	7.1%	18913	2.2%	21038
94547 CA, HERCULES	19232	-0.9%	17519	-1.4%	16023	2.0%	17649
94530 CA, EL CERRITO	49793	-6.0%	20049	0.8%	21055	0.4%	21424
94801 CA, RICHMOND	17063	1.9%	20289	2.8%	23742	2.1%	26186
94803 CA, EL SOBRANTE	19518	0.3%	20115	-1.2%	18660	0.7%	19328
94804 CA, RICHMOND	26734	1.1%	29657	1.2%	31846	1.1%	33648
94805 CA, RICHMOND	10189	1.2%	11395	1.8%	12635	1.4%	13539
94806 CA, SAN PABLO	35528	1.7%	41611	1.1%	44424	1.3%	47376
94589 CA, VALLEJO	27447	1.7%	32167	-2.6%	27054	0.6%	27930
94590 CA, VALLEJO	35692	-2.1%	28198	0.8%	29551	-0.2%	29260
94591 CA, VALLEJO	2676	139%	39777	1.7%	43908	0.7%	45498
94585 CA, SUISUN CITY	527	532%	28564	-3.6%	22342	1.3%	23742
North	291883	0.4%	302630	0.4%	310153	1.1%	326618
94601 CA, OAKLAND	34807	1.6%	40259	0.1%	40504	0.1%	40783
94602 CA, OAKLAND	21813	0.8%	23547	-0.4%	22970	-0.6%	22329
94603 CA, OAKLAND	19329	1.5%	22167	-1.2%	20584	-0.5%	20034
94605 CA, OAKLAND	32308	0.1%	32758	-0.5%	31798	-0.9%	30288
94606 CA, OAKLAND	28913	1.5%	33125	0.4%	33996	0.3%	34421
94607 CA, OAKLAND	16410	0.0%	16345	0.4%	16700	-0.3%	16426
94608 CA, EMERYVILLE	18090	1.4%	20628	-1.0%	19416	-0.4%	18995
94609 CA, OAKLAND	17286	-0.1%	17185	-0.5%	16686	-0.8%	16021
94610 CA, OAKLAND	26210	-0.1%	26034	-1.5%	23749	-1.3%	22156
94611 CA, OAKLAND	30347	0.2%	31097	-0.5%	30130	-0.7%	29113
94612 CA, OAKLAND	8540	2.2%	10387	0.5%	10709	-0.6%	10409
94618 CA, OAKLAND	13845	-0.5%	13190	-0.3%	12959	-0.9%	12362
94619 CA, OAKLAND	18648	0.1%	18897	1.0%	20036	-0.5%	19495
94621 CA, OAKLAND	18347	1.9%	21748	0.7%	22646	-0.1%	22491
94702 CA, BERKELEY	12907	0.2%	13145	-0.9%	12443	-0.9%	11870
94703 CA, BERKELEY	15126	1.1%	16826	-1.2%	15631	-1.0%	14868
94704 CA, BERKELEY	21815	-0.5%	20777	-0.8%	19773	0.1%	19901
94705 CA, BERKELEY	11558	-0.6%	10863	1.6%	11885	-0.2%	11756
94706 CA, ALBANY	12485	0.5%	13121	-1.2%	12215	-0.7%	11765
94707 CA, BERKELEY	10243	-0.4%	9869	0.3%	10028	-0.8%	9639
94708 CA, BERKELEY	9216	0.0%	9227	1.0%	9792	-0.6%	9522
94709 CA, BERKELEY	9385	0.2%	9535	-0.7%	9132	-1.0%	8677
94710 CA, BERKELEY	6764	-0.6%	6371	2.1%	7184	0.2%	7266
94501 CA, ALAMEDA	9198	42.7%	48429	0.0%	48461	-0.3%	47691
94502 CA, ALAMEDA	7761	4.2%	11014	0.9%	11633	0.6%	11988
PCCD	431351	1.5%	496544	-0.2%	491060	-0.4%	480266

Source: Geolytics, Inc. (2007).

APPENDIX D
ALAMEDA COUNTY POPULATION, 2000-2020
BY AGE AND RACE AND ETHNICITY

	2000		Change 2000-10		2010	Change 2010-20		2020	
	%	n	n	%	n	n	%	n	%
AMERICAN INDIAN	0.4%	5,513	2,422	44%	7,935	2,756	35%	10,691	0.6%
0-14	19.3%	1,064	-12	-1%	1,052	496	47%	1,548	14.5%
15-24	13.8%	763	384	50%	1,147	-44	-4%	1,103	10.3%
25-54	51.8%	2,856	995	35%	3,851	1,015	26%	4,866	45.5%
55+	15.1%	830	1,055	127%	1,885	1,289	68%	3,174	29.7%
ASIAN	20.6%	299,159	77,713	26%	376,872	70,010	19%	446,882	26.9%
0-14	19.9%	59,396	14,710	25%	74,106	7,855	11%	81,961	18.3%
15-24	14.3%	42,852	2,406	6%	45,258	8,121	18%	53,379	11.9%
25-54	49.8%	148,995	27,050	18%	176,045	9,487	5%	185,532	41.5%
55+	16.0%	47,916	33,547	70%	81,463	44,547	55%	126,010	28.2%
BLACK	14.8%	215,010	-29,526	-14%	185,484	-15,948	-9%	169,536	10.2%
0-14	23.2%	49,915	-15,182	-30%	34,733	-2,362	-7%	32,371	19.1%
15-24	13.6%	29,174	-1,463	-5%	27,711	-10,106	-36%	17,605	10.4%
25-54	45.7%	98,319	-19,901	-20%	78,418	-9,389	-12%	69,029	40.7%
55+	17.5%	37,602	7,020	19%	44,622	5,909	13%	50,531	29.8%
HISPANIC	19.0%	275,632	88,838	32%	364,470	98,531	27%	463,001	27.8%
0-14	29.0%	79,917	17,095	21%	97,012	14,319	15%	111,331	24.0%
15-24	18.0%	49,483	10,441	21%	59,924	14,770	25%	74,694	16.1%
25-54	43.8%	120,832	43,794	36%	164,626	35,364	21%	199,990	43.2%
55+	9.2%	25,400	17,508	69%	42,908	34,078	79%	76,986	16.6%
MULTI-RACE	2.9%	41,527	8,149	20%	49,676	2,684	5%	52,360	3.1%
0-14	39.0%	16,201	255	2%	16,456	-9,219	-56%	7,237	13.8%
15-24	16.9%	7,018	2,156	31%	9,174	4,144	45%	13,318	25.4%
25-54	35.5%	14,761	2,676	18%	17,437	3,543	20%	20,980	40.1%
55+	8.5%	3,547	3,062	86%	6,609	4,216	64%	10,825	20.7%
PACIFIC ISLANDER	0.6%	9,228	2,311	25%	11,539	2,770	24%	14,309	0.9%
0-14	25.7%	2,376	224	9%	2,600	886	34%	3,486	24.4%
15-24	17.5%	1,611	204	13%	1,815	-71	-4%	1,744	12.2%
25-54	46.7%	4,314	1,000	23%	5,314	676	13%	5,990	41.9%
55+	10.0%	927	883	95%	1,810	1,279	71%	3,089	21.6%
WHITE	41.8%	607,009	-52,854	-9%	554,155	-47,453	-9%	506,702	30.5%
0-14	15.4%	93,295	-19,486	-21%	73,809	-7,573	-10%	66,236	13.1%
15-24	10.3%	62,366	-5,676	-9%	56,690	-14,759	-26%	41,931	8.3%
25-54	50.1%	304,026	-61,319	-20%	242,707	-55,155	-23%	187,552	37.0%
55+	24.3%	147,322	33,627	23%	180,949	30,034	17%	210,983	41.6%
TOTAL	100%	1,453,078	97,053	7%	1,550,131	113,350	7%	1,663,481	100%
0-14	20.8%	302,164	-2,396	-1%	299,768	4,402	1%	304,170	18.3%
15-24	13.3%	193,267	8,452	4%	201,719	2,055	1%	203,774	12.2%
25-54	47.8%	694,103	-5,705	-1%	688,398	-14,459	-2%	673,939	40.5%
55+	18.1%	263,544	96,702	37%	360,246	121,352	34%	481,598	29.0%

Source: CA DOF (2007).

**APPENDIX E
HIGH SCHOOL GRADUATES, 1974-2016**

	<i>Alameda</i>	<i>Contra Costa</i>	<i>Santa Clara</i>	<i>Calif/20</i>	<i>PCCD Area</i>	<i>PCCD/ Alam.Co.</i>	<i>Calif.</i>
1974	13,273	9,174	16,775	13,671			273,411
1975	13,016	9,063	16,683	13,421			268,425
1976	12,772	9,296	16,437	13,231			264,625
1977	12,577	8,999	17,029	13,085			261,698
1978	12,116	8,720	15,774	12,535			250,708
1979	11,611	8,296	15,188	12,461			249,217
1980	10,894	8,240	14,425	12,109			242,172
1981	10,883	8,125	15,353	12,067			241,343
1982	10,454	7,690	14,465	11,845			236,897
1983	10,372	7,729	14,202	11,610			232,199
1984	10,106	7,184	13,680	11,272			225,448
1985	10,821	7,421	13,634	11,451			229,026
1986	10,421	8,084	14,019	11,871			237,414
1987	11,171	8,375	14,168	12,476			249,518
1988	10,477	7,926	13,727	12,231			244,629
1989	9,724	7,466	12,543	11,815			236,291
1990	9,666	6,925	12,217	11,708			234,164
1991	9,810	7,075	12,419	12,230			244,594
1992	9,677	7,061	12,946	12,466			249,320
1993	9,732	7,215	12,765	12,654			253,083
1994	9,564	7,402	12,541	12,760	3101	0.324	255,200
1995	9,710	7,661	12,325	12,954	3123	0.322	259,071
1996	10,094	8,113	12,393	13,454	3406	0.337	269,071
1997	10,334	8,335	12,748	14,122	3205	0.310	282,432
1998	11,058	8,777	13,429	14,930	3387	0.306	298,602
1999-00	11,190	8,764	13,795	15,455	3543	0.317	309,108
2000	11,264	9,139	14,299	15,779	3350	0.297	315,575
2001	11,759	9,667	14,308	16,270	3432	0.292	325,409
2002	11,947	10,001	14,952	17,037	3658	0.306	340,733
2003	12,110	10,018	14,773	17,160	3543	0.293	343,195
2004	12,681	10,218	15,158	17,747	4013	0.316	354,945
2005	12,680	9,897	15,290	17,447	3908	0.308	348,933
2006	13,393	10,243	15,615	18,183	4095	0.306	363,662
2007	13,578	10,730	16,158	18,767	4211	0.310	375,333
2008	13,475	10,817	15,984	18,744	4151	0.308	374,877
2009	13,179	10,815	16,297	18,616	4059	0.308	372,310
2010	12,914	10,836	16,189	18,592	3987	0.309	371,848
2011	12,744	10,934	16,136	18,563	3928	0.308	371,253
2012	12,435	10,994	16,140	18,336	3834	0.308	366,720
2013	12,203	10,933	15,956	18,032	3764	0.308	360,644
2014	11,981	10,864	15,953	17,702	3694	0.308	354,046
2015	11,826	10,867	16,036	17,545	3646	0.308	350,900
2016	11,368	10,904	15,869	17,400	3505	0.308	348,000

Sources: CA DOF (2007), CA DE (2007), McIntyre (2007).

**APPENDIX F
PCCD FEEDER HIGH SCHOOL PREPARATION**

Graduation Rates: grads/(grads+dropouts over 4 run-up years)

	2000-01		2005-06		Rate	
	Grads	Rate	Grads	Rate	Change	% Chg.
<i>Alameda Unified</i>	497	0.956	659	0.888	-0.07	-7.1%
<i>Alameda Co. Office</i>	18	1.000	64	0.877	-0.12	-12.3%
<i>Albany</i>	216	0.995	291	0.945	-0.05	-5.0%
<i>Berkeley</i>	673	0.896	689	0.859	-0.04	-4.1%
<i>Emery</i>	44	0.957	37	0.587	-0.37	-38.7%
<i>Oakland</i>	1,660	0.735	1,919	0.608	-0.13	-17.3%
<i>Piedmont</i>	242	1.000	249	1.000	0.00	0.0%
	2000-01		2005-06			
<i>PCCD Feeders</i>	3,350	0.840	3,908	0.754	-0.09	-10.3%
<i>Other Alameda Co.</i>	7,919	0.920	8,800	0.871	-0.05	-5.3%
<i>Alameda Co.</i>	11,269	0.897	12,708	0.835	-0.06	-6.9%
<i>State Total</i>	316,124	0.868	349,191	0.832	-0.04	-4.1%
			0.703	0.692		
			0.250	0.232		
			0.921	0.871		

Grads with UC, CSU Requirements

	2000-01		2005-06		Rate	
	Grads	w Reqs	Grads	w Reqs	Change	% Chg.
<i>Alameda Unified</i>	497	0.495	659	0.741	0.25	49.7%
<i>Alameda Co. Office</i>	18	0.000	64	0.203	0.20	
<i>Albany</i>	216	0.676	291	0.694	0.02	2.7%
<i>Berkeley</i>	673	0.688	689	0.583	-0.11	-15.3%
<i>Emery</i>	44	0.682	37	0.000	-0.68	-100.0%
<i>Oakland</i>	1,660	0.246	1,919	0.371	0.13	50.8%
<i>Piedmont</i>	242	0.872	249	0.888	0.02	1.8%
	2000-01		2005-06			
<i>PCCD Feeders</i>	3,350	0.449	3,908	0.521	0.07	16.1%
<i>Other Alameda Co.</i>	7,919	0.412	8,800	0.444	0.03	7.8%
<i>Alameda Co.</i>	11,269	0.423	12,708	0.468	0.05	10.6%
<i>State Total</i>	316,124	0.356	349,191	0.359	0.00	0.8%
			0.703	0.692		
			0.134	0.160		
			0.412	0.444		

Source: California DE (2007), McIntyre (2007).

APPENDIX G

SAT I TEST TAKING AND RESULTS

	2003-04			2005-06			Change			
	Gr 12	%Tstd	>1000	Gr 12	%Tstd	>1500	%Tstd	%	>Std.	%
Alameda Unif. County Office	836	0.52	0.31	842	0.54	0.27	0.02	4%	-0.04	-13%
Albany	230	0.71	0.57	288	0.81	0.60	0.10	14%	0.03	5%
Berkeley	711	0.66	0.48	848	0.49	0.33	-0.17	-26%	-0.15	-31%
Emery	44	0.30	0.02	40	0.45	0.05	0.15	50%	0.03	150%
Oakland	1857	0.48	0.12	2,101	0.54	0.12	0.06	13%	0.00	0%
Piedmont	224	0.95	0.84	251	0.88	0.73	-0.07	-7%	-0.11	-13%
	2003-04			2005-06						
PCCD Feeders	4,088	0.53	0.28	4,370	0.57	0.26	0.03	6%	-0.02	-9%
Other Alameda	9,434	0.46	0.27	8,338	0.50	0.27	0.04	10%	0.00	0%
Alameda Co.	13,522	0.48	0.27	12,708	0.52	0.27	0.04	8%	0.00	-1%
State Total	396K	0.35	0.186	383K	0.41	0.19	0.06	17%	0.01	3%

2004-05			
Gr 12	%Tstd	>1000	

Alameda County			
Total	14,302	0.49	0.28
Male	7,094	0.44	0.28
Female	7,208	0.54	0.29
African American	2,363	0.32	0.07
American Indian	82	0.40	0.23
Asian	3,692	0.63	0.38
Hispanic/Latino	2,963	0.25	0.09
White	4,757	0.39	0.29

Source: California DE (2007).

APPENDIX H. COMPARING PCCD PROGRAMS TO AREA SKILL DEMANDS

	PCCD PROGRAMS				DEMAND for PSE<BA			"RATIOS"	
	FTE	Yrly%	Degree	Yrly%	Yearly	Yearly	Ave.	2006-07	Yearly
	2006-07	Chg.	Certs	Chg.	Jobs	%Chg.	Hourly	Size	%
	2004-07		2006-07/2002-07		2004-14	2004-14	Wage		Chg
<i>Business Mgrs., Oprs</i>	614	-3.0%			922	0.9%		0.3	-3.4
Managers,Operators			38	3.1%	185	1.6%	\$27		
1st Line Supervisors					92	1.1%	\$24		
Assistants/CIS Apps			5	-16.0%	357	0.0%	\$19		
Accounting,Bkkg			21	3.3%	140	0.0%	\$19		
Customer Service Reps					148	1.7%	\$17		
Computer Info Syst.	553	-6.8%	11	-22%	47	1.3%	\$30	5.8	-5.2
Architects,Engineers	137	0.5%			89	1.2%	\$26	0.8	0.4
Science Technicians					30	1.0%	\$22		
Community Services	154	-9.3%			18	2.1%	\$15	4.4	-4.4
ParaLegal	50	-9.4%			7	0.2%	\$26	3.6	-59.1
PreSch/Child Developmt	238	-4.4%			36	2.0%	\$13	3.3	-2.2
Teacher Assistants/Aids					95	0.9%	na		
MediaDesign,GraphicArts	396	-6.5%			15	0.6%	\$28	13.5	-10.7
Art,Media,Entertainment	1319	-2.0%			92	1.1%	\$19	7.1	-1.9
<i>Health</i>									
Registered Nurses	156	9.3%			232	2.0%	\$40	0.3	4.6
Vocational Nurses	54	0.0%			35	0.9%	\$25	0.8	0.0
Health Technicians	264	6.4%			140	1.2%	\$22	0.9	5.2
Health Care Support					157	0.9%	\$18		
Adm. of Justice	266	175.0%			75	0.4%	\$35	1.8	484.2
Fire Fighters/Supvrs					71	0.9%	\$39	0.0	0.0
Chefs and Food Managers	293	-4.7%			76	1.5%	\$16	1.9	-3.2
Appearance Workers	307	-2.1%			49	1.7%	\$9	3.1	-1.3
Fitness Trainers, Coaches	582	0.0%			55	1.5%	\$20	5.3	0.0
Real Estate Sales/Brokers	158	-8.3%			23	0.7%	\$40	3.5	-11.7
<i>Construction</i>									
Supervisors/Inspectrs	67	3.4%			81	1.1%	\$34	0.4	3.1
Carpenters	95	-10.0%			190	0.2%	\$26	0.2	-64.9
Other Constr. Trades					273	1.0%	\$26		
Sales Supvrs/Managers					104	0.1%	\$24		
Sales Reps: travel, technical					237	0.9%	\$24		
Install,Repair Supvrs,Mgrs.					40	2.6%	\$29		
AirFrame,PowerplantOps	65	-2.4%	23	-19.3%	36	0.0%	\$28	0.9	0.0
Electronic Repair					45	0.1%	\$25		
Auto/Truck Mechanics	289	-6.8%			139	1.4%	\$25	1.0	-5.0
<i>Environmental Technology</i>									
Environ'mental Control	29	-5.9%			20	2.3%	\$22	0.7	-2.6
Production Supvrs, Mgrs.					42	0.8%	\$25		
Welders	53	-6.0%			22	1.0%	\$20	1.2	-6.1
<i>Logistics, Transportation</i>									
Logistics Managers					33	0.8%	\$24		
Heavy Truck Drivers					87	0.8%	\$20		

Notes: Size ratio = .5FTE/OpenJobs; Growth Ratio = FTE%YrlyChg/Job%YrlyChg.

"Right" size and growth ratios = 1.0.

Sources: CA EDD (2007), PCCD IR&ID (2007), McIntyre (2007).