An aerial photograph of the Los Angeles skyline, showing several prominent skyscrapers and a dense urban area. The image is slightly faded and has a grainy texture.

**LOS ANGELES BASIN
ECONOMIC DEVELOPMENT INITIATIVE**

**SECOND STAGE PAPER:
A Background Report**

April 1999

**Prepared by
The Center for Economic Development
University of Southern California**



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Executive Summary

The Economic Development Administration (EDA) programs provide assistance to economically distressed areas to create new jobs, help retain existing jobs, and stimulate industrial and commercial growth. This report is second in a series produced by the USC Center for Economic Development. It is aimed at shaping the investment strategy of the EDA Western Regional Office in the Los Angeles Basin (LA Basin or the Basin) which consists of the five counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura in Southern California. The report serves as a backdrop to the *Los Angeles Economic Development Initiative Conference*, and is intended to stimulate discussion among the EDA constituency (i.e. the grantees and potential beneficiaries). The purpose of this report is to:

- i. Inform the EDA constituency about the new law enacted in 1998, and its impact on EDA program assistance;
- ii. Provide a demographic, economic, and social profile of the Los Angeles Basin that identifies development problems and opportunities;
- iii. Show specific areas of economic distress that qualify for EDA assistance under the new law; and
- iv. Present EDA's existing and potential economic development strategies for creating jobs in distressed areas of the Los Angeles Basin.

The New Law

In a major legislative accomplishment, EDA programs were re-authorized for a continued period of 5 years effective February 11, 1999 under the EDA Reform Act of 1998. The new law effected three major changes in the EDA program assistance. First, the eligibility requirements were consolidated into three basic distress criteria: low per capita

income, high unemployment, and special needs arising from short- or long-term changes in the area's economic conditions. Second, the Grant Rates have been standardized. There is a basic rate of a 50 percent maximum Federal share for all programs. Third, all grant applicants must coordinate their project planning efforts with the local and regional agencies so that they are consistent with a Comprehensive Economic Development (CED) Strategy. The CED consolidates prior EDA requirements for an Overall Economic Development Plan (for Public Works Assistance) and an Economic Adjustment Plan (for Economic Adjustment Award).

PROFILE OF LOS ANGELES BASIN

The population of the Los Angeles Basin exceeds 16 million and would rank fourth in the nation—after California, Texas, and New York—if it were a separate state. The population is ethnically diverse and very cosmopolitan, with a great range of skills and work experience backgrounds. The ethnic composition is also undergoing substantive change.

The Los Angeles Basin has undergone a major economic restructuring since 1989 when the economy was dominated by the aerospace and defense related industries that subsequently closed (or were severely down-sized) causing a serious recession. The local economy has improved steadily, and has now recovered to the point where employment levels surpass the pre-recession levels. The job recovery has been broad based with a strong growth being evidenced in the manufacturing sector, including the production of primary and prefabricated materials, industrial machinery, electronic products, and transportation equipment.

The Basin has also been a leader in international trade, high-technology, entertainment, manufacturing, and design (especially, engineering and fashion design). The California

Employment Development Department forecasts that the Los Angeles Basin will add 775,600 new wage and salary jobs between 1995 and 2002. A significant part of the job growth will be in service, construction, trade and manufacturing. Furthermore, small businesses (with less than 100 employees) are a significant part of the Basin's economy.

Economic Distress in the Los Angeles Basin

Although the economy of the Los Angeles Basin has improved overall, there are several communities in the area that face economic distress. Based on the 1990 census, 18 cities in the Basin had Per Capita Income at or below 80% of the national average, making them eligible for EDA assistance under this criterion. In September 1998, the 24-month average unemployment rates of four of the five counties in the Basin were 1% or higher than the national average. At the city level, the 24-month average unemployment rates of 43 cities were 1% or higher than the national average. Thus there are several pockets of Los Angeles Basin that qualify under the economic distress criteria defined by the EDA. Other events in the Basin have also caused short- and long-term distress. These include the decline of the aerospace and defense industries, the 1992 "civil disturbance," the closure of several military bases, and the 1994 Northridge earthquake.

EDA's Role in the Los Angeles Basin

EDA has been involved in assisting the distressed communities of the Los Angeles Basin in a significant way. Projects funded by the EDA include the development of business/ technology incubators, the revitalization of closed Naval bases, and the improvements in the public infrastructure. In addition to the grants, the EDA also

provides revolving loan funds to counties, cities and non-profit agencies.

Economic Development Strategies

The economic development strategies that promise job creation and alleviation of economic distress in the Los Angeles Basin include:

- i. Sustainable Development – The re-industrialization of the Los Angeles basin with eco-industrial parks and “clean,” 21st century manufacturing using “state of the art” environmental technologies. “Clean-up” of brownfields is a prerequisite in older industrial areas.
- ii. Information Technology – The provision of technology and telecommunications infrastructure, support for entrepreneurs and the development of a workforce skilled in this field.
- iii. Collaborative Regional Planning involving partnerships at the city, county and state levels.

In the context of *Sustainable Development*, re-industrialization of the Los Angeles Basin is significant since manufacturing remains a key economic sector. The manufacturing employment base in the Basin is surpassed in size only by the states of entire California, Ohio and Texas. Los Angeles county was the “number one” manufacturing center in the entire United States in 1997. Metal fabrication, apparel design and production, and equipment assembly are notable manufacturing industries in the Basin. The manufacturing employment base is concentrated in South Central Los Angeles which also has many “pockets” of economic distress. The manufacturing sector has a high multiplier effect and pays higher wages than service sector occupations. Thus, an economic development strategy concentrated on manufacturing is pertinent to accomplishing

a recovery of the economically distressed areas of the Los Angeles Basin.

However, the proportion of manufacturing employment has declined over the years due in part to regulatory and environmental constraints. Strategies to strengthen the manufacturing base in the Los Angeles Basin must address these issues. The need to “clean up” and redevelop industrial areas with brownfield (ground contamination) problems is a prerequisite to any new development. Once this is accomplished, the re-industrialization of the Los Angeles Basin can, and should be achieved through the development of ecologically sound industries, clustered together. For example, “zero emission” industrial parks minimize or eliminate toxic emissions and waste by co-locating firms with compatible production streams where the waste materials of one firm are used as the raw material for another.

Re-industrialization in the context of sustainable development implies the use of *Information Technology* to accomplish efficient and “clean” production and distribution methods. The Los Angeles Basin already offers a well-developed “platform” of high technology-based companies that produce computer software, multimedia entertainment, biological testing innovations and pharmaceuticals, and communication services. Indeed, this area is variously known as the Tech Coast or the Digital Coast. The development and use of high technology tools have contributed substantially to the recent growth of the local, regional and national economies. The use of new technologies can add value and increase productivity in the manufacturing sector.

To date however, advances in information technology have not fully benefited the distressed communities of the Los Angeles Basin. Technology-based economic development calls for the provision of new

telecommunications infrastructure, programs that support entrepreneurship, and training to develop a workforce skilled in both the use and maintenance of “state of the art” technology systems. EDA has emphasized the use of technology advancements in its program assistance efforts by promoting the development of “smart” buildings, high-tech business incubators, technology transfer facilities, and distance learning centers.

The need for more *cooperation and collaboration* among local jurisdictions, community development corporations and counties is paramount to advancing the economic development objectives in the Los Angeles Basin. Creative collaborative approaches provide the ways and means to leverage resources, build social capital, diversify funding, and sustain regional development efforts. EDA supports projects that demonstrate locally created partnerships and focus on regional solutions that transcend jurisdictional and other boundaries.

Coordination and collaboration are essential to the success of EDA’s sustainable development and information technology strategies.

1. Economic Development Administration: Its Mission and New Legislative Re-authorization

1.1 Mission of EDA

The Economic Development Administration (EDA) in the Department of Commerce was established under the Public Works and Economic Development Act of 1965 (42 U.S.C. 3121) to generate new jobs, help retain existing jobs, and stimulate industrial and commercial growth in economically-distressed areas of the United States. EDA assistance is available to rural and urban areas of the Nation experiencing high unemployment, low income, or sudden and severe economic distress.

In fulfilling its mission, EDA is guided by the principle that distressed communities must be empowered to develop and implement their own economic development and revitalization strategies. Based on these priorities developed locally and regionally, EDA works in partnership with state and local governments, regional economic development districts, public and private nonprofit organizations, and Indian tribes. EDA helps distressed communities address problems associated with long-term economic distress, as well as sudden and severe economic dislocations including those recovering from the economic impacts of natural disasters, and the closure of military installations and other Federal facilities.¹

The purpose of EDA is to address economic problems affecting economically distressed rural and urban communities by helping them:

1. Develop and strengthen their economic development planning and institutional capacity to design and implement business outreach and development programs;

¹ U.S. Department of Commerce (Economic Development Administration), "Mission," [<http://www.doc.gov/eda/html/mission.htm>].

2. Develop or expand public works and other facilities, financing tools, and resources that will create new job opportunities, save existing jobs, retain existing businesses, and support the development of new businesses.²

1.2 The New Legislation

Public Law 105-393 comprehensively amended the Public Works and Economic Development Act of 1965 (PWEDA) and took effect on February 11, 1999. It reauthorized Economic Development Administration programs for a period of five years. The new EDA Reform Act of 1998 (P.L. 105-393; 42-U.S.C. 3121 et seq.; 112 Stat. 3596) is a major legislative accomplishment for EDA, reflecting bipartisan, collaborative efforts by the Congress and the Administration to strengthen the economy of the Nation's most distressed communities.

Under the new legislation, EDA programs provide financial assistance through grants under the following Parts³:

- ◆ Grants for Public Works and Development Facilities (Part 305)
- ◆ Planning Assistance (Part 306)
- ◆ Local Technical Assistance, University Center Technical Assistance, National Technical Assistance, Training, Research, and Evaluation (Part 307)
- ◆ Economic Adjustment Grants (Part 308)
- ◆ Certification and Adjustment Assistance for Firms (Part 315)

² U.S. Department of Commerce (Economic Development Administration), *13 CFR Chapter III*, [Docket No. 990106003-9003-01], RIN 0610-AA56, p. 14.

³ *Ibid* [2].

There are three major changes in the EDA programs under the new legislation:

- ◆ Eligibility;
- ◆ Grant Rates; and
- ◆ Comprehensive Economic Development Strategies

Eligibility:

In Part 301 of the new law, the eligibility of areas for public works or economic adjustment assistance has been modified in two major ways:

- (i) **Criteria consolidation:** The area eligibility criteria for economic adjustment grants and the nine additional criteria for public works grants under the old law have been consolidated into three basic distress factors:
 - (a) **Low income:** An area is eligible if it has a per capita income of 80 percent or less of the national average for the most recent period for which data are available.
 - (b) **High unemployment:** An area is eligible if it has an unemployment rate for the most recent 24 month period for which data are available at least one percent greater than the national average.
 - (c) **Special need:** If there is a special need arising from actual or threatened economic adjustment problems resulting from “severe short-term or long-term changes in economic conditions.”⁴
- (ii) **Time of qualification:** Eligibility is determined at the time the EDA receives an application and is based on the most recent federal data available for the area where the project will be located or where the substantial direct benefits will be received. It would not matter whether the area had ever been designated as a redevelopment area.

⁴ Ibid [2], Part 301.2, “Area Eligibility,” p. 17-18.

A non-distressed area (i.e. an area that does not meet the above area eligibility criteria) within an Economic Development District is also eligible if the project is of a substantial direct benefit to an area that meets at least one of the area eligibility criteria mentioned above. A project provides substantial direct benefit if it provides significant employment opportunities for unemployed, underemployed, or low-income residents.

A smaller area is also eligible even though it may be a part of the larger community which overall has low distress. The project area must be of sufficient size appropriate to the proposed project, and the proposed boundaries must be justified in relation to the project’s benefits to the area.

There is also a provision that allows “pockets” of poverty or high employment to be eligible for EDA assistance. It will be possible to do projects in an ineligible part of an economic development district if the project serves an eligible part of the district.

Grant Rates:

The grant rates have been considerably standardized in Parts 204 and 205 of the new law. There is a basic rate of a 50 percent maximum Federal share for all programs. This is a major change from the old law where there were different basic maximum rates for public works, technical assistance, planning, and economic adjustment ranging from 50 to 100 percent. In the new law, EDA may reduce or waive the non-Federal share for Indian tribes; in other cases EDA may reduce the non-Federal share of the project cost below 50% with respect to the project criteria.⁵

⁵ Ibid [2], Part 301.4, “Grant Rates,” p. 20.

Comprehensive Economic Development Strategies:

Under the new law, a new requirement of Comprehensive Economic Development (CED) Strategy consolidates the previous requirement of Overall Economic Development Program (OEDP) for Public Works assistance and Economic Adjustment Plan requirement for an Economic Adjustment award.⁶

A CED strategy is prepared with EDA planning assistance, developed under another Federally assisted supported program, or developed independent of Federal assistance. It must be submitted with the application for a public works or economic adjustment project (or incorporated by reference in the application if a current acceptable strategy had previously been submitted). The strategy must identify and address economic problems in a manner that promotes economic opportunity and development. The requirement of a CED strategy strengthens the need for collaboration among local and regional agencies for EDA assistance.

1.3 EDA Programs and the Los Angeles Basin

EDA programs hold significance for the Los Angeles Basin. The Los Angeles Basin exhibits a variety of problems including pockets of economic distress, chronic unemployment and low per capita income that qualifies many cities in the Basin for EDA assistance under the stipulations of the new law. However, the Basin, with its strong assets and core competencies presents great opportunities too. Judiciously targeted EDA programs in the region have made a difference in the past, and continue to stimulate jobs and economic growth.

It is in this light that we present in Chapter 2 a profile of the Los Angeles Basin highlighting the demographic,

economic, and social trends and characteristics. Chapter 3 identifies the areas within the Basin that qualify as economically distressed areas under the new EDA legislation. Chapter 4 profiles a sampling of EDA projects and investments undertaken in the Basin. Chapter 5 delineates the economic development strategies and funding priorities of EDA that can be effective in advancing the Los Angeles Basin's economy and spur jobs. In this chapter, the role and application of sustainable development, information technology, and collaboration/partnerships toward local economic development are discussed.

⁶ Ibid [2], Part 302, "Economic Development Districts," p. 21.

2. The Los Angeles Basin

2.1 Demographics

Population

The Los Angeles Basin (Basin) or the Los Angeles five-county area (Los Angeles, Orange, Riverside, San Bernardino, and Ventura) sprawls over more than 35,000 square miles and encompasses 178 incorporated cities (33 of which have a population of more than 100,000) (Map 2.1). The population of Los Angeles Basin, exceeding over 16 million in 1999, is the most cosmopolitan in the world, offering the greatest range of skills and backgrounds.⁷ If the Basin were a separate state, it would rank fourth in the nation in terms of population after California, Texas, and New York. By the year 2020, the Basin population is expected to reach 21.5 million (Chart 2.1).⁸

There are three major factors driving this population growth—natural increase, internal migration, and immigration. Internal migration is the most volatile among these factors, since it is generally responsive to the number of available jobs. Over the past two decades, the Los Angeles Basin experienced its first net out-migration during the 1991-93 recession. However, with the recent economic growth and number of jobs, the number of people leaving the Basin has leveled off as compared to the early 1990s. At the same time, there has been an

⁷ State of California (Department of Finance), *County Population Projections with Race/Ethnic Detail*, Sacramento, December 1998.

⁸ Ibid [1].

Map 2.1
The Los Angeles Basin (5-County Area)

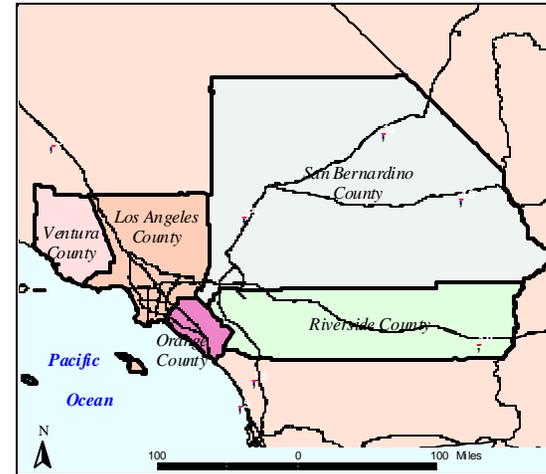
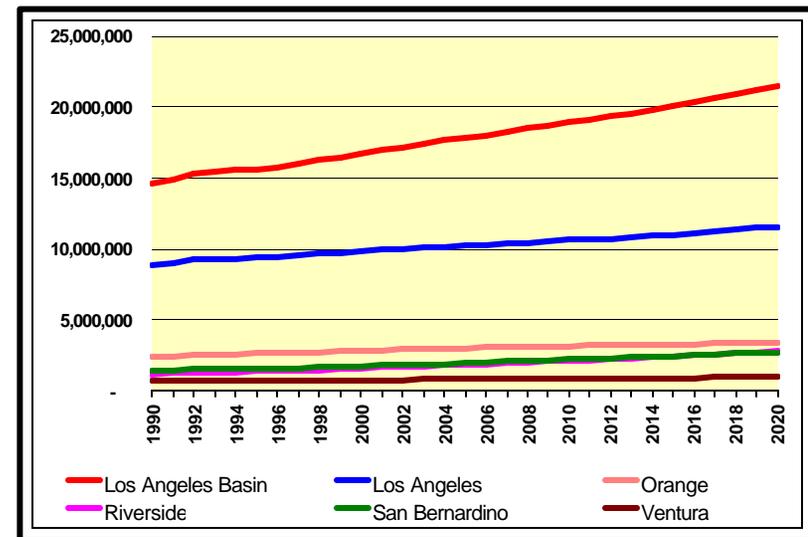


Chart 2.1
Population of the Los Angeles Basin, 1990-2020



Source: Department of Finance, 1998

increase in the number of people moving in from other parts in the nation.⁹

Ethnic Composition

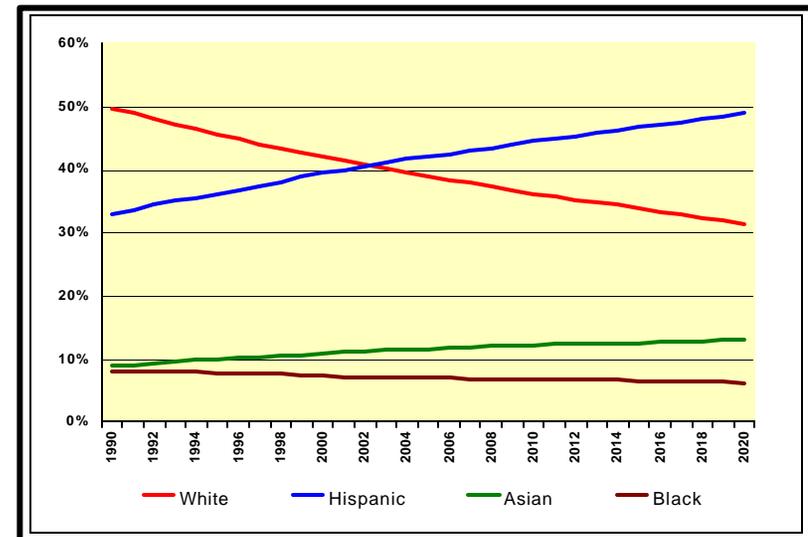
The Los Angeles Basin is also undergoing a major shift in its ethnic composition. According to the 1990 Census, 52% of the Los Angeles Basin's population was White, 31% Hispanic, 8% Black, and 9% Asian. The California Department of Finance projects a steady decline in the proportion of Whites and Blacks; and a steady increase in the proportion of Hispanic and Asian population. By the year 2020, it is forecasted that the proportion of the Whites and Blacks will decline to 31% and 6% respectively. In the same period, the proportion of Hispanics will increase to 49%, and that of the Asians will increase to 13% (Chart 2.2).¹⁰

2.2 The Economy

Background

Based on the gross product for 1996, the Los Angeles Basin's economy ranks 12th in the world, ahead of countries such as Netherlands, Australia, and India.¹¹ The Los Angeles Basin provides excellent access to national and international markets, and is a leader in international trade, high-technology, computer services, bio-medical research, multi-

Chart 2.2
Los Angeles Basin Population By Ethnicity, 1990-2020



Source: Department of Finance, 1999

⁹ Southern California Association of Governments, *State of the Region: Measuring Progress into the 21st Century*, Los Angeles, 1998, p. 6.

¹⁰ Ibid [1].

¹¹ Los Angeles Economic Development Corporation, *Essential Southern California, An Economic Atlas of Southern California*, Los Angeles, 1997/1998.

media, entertainment, manufacturing, and design (especially, engineering and fashion design).

Prior to 1989, the Basin's economy was dominated by aerospace- and defense- related industries. However, during the early 1990s, the economy underwent a major restructuring due to:

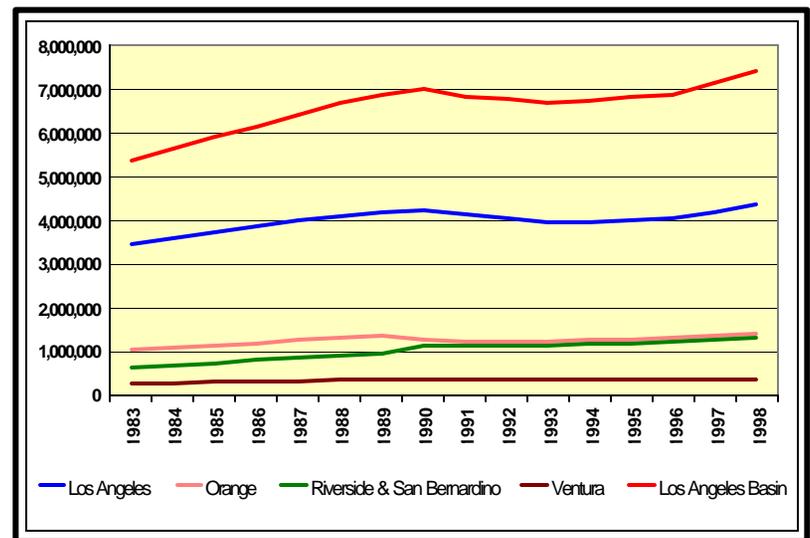
- (a) decline in government spending on aerospace and defense industries, as a result of the end to the Cold War;
- (b) the “civil disturbance” of 1992; and the Northridge earthquake of 1994; and
- (c) business flight due to stringent environmental laws, and excessive government regulations.

Since 1994, the economy of the Basin has grown continuously, albeit at a varied pace. The employment growth has been the fastest in Orange, Riverside, and San Bernardino counties, and slower in Los Angeles and Ventura counties. However, by 1998, all counties in the Basin had surpassed their pre-recession employment levels. The job recovery has been broad based with major sectors such as primary and fabricated metals, industrial machinery, electronic products, and transportation equipment posting impressive job gains. At present, the economy is in a state of steady growth with increasing entrepreneurial activities in hi-tech, entertainment, and apparel industry clusters.¹²

Employment

Since the start of recovery from the latest recession in 1994, the total employment in the Los Angeles Basin has risen by 9.8 percent, from 6.73 million annual average jobs in 1994 to 7.39 million

Chart 2.3
Annual Average Employment in the Los Angeles Basin, 1983-98



Source: California Employment Development Department, 1999

¹² Ibid [3], p. 9-10.

jobs in 1998 (Chart 2.3).¹³ However, there is a wide variation among the counties in the Los Angeles Basin. In 1998, the annual average employment ranged from 4.33 million in Los Angeles county to 0.36 million in Ventura county. It is apparent that the overall figures are heavily weighted by the employment base in Los Angeles and Orange counties.

Unemployment

During the recession, in 1992, the annual average unemployment level peaked at 696,500 for the Los Angeles Basin. By 1998, the annual average unemployment in the Los Angeles Basin had fallen to its lowest level since 1991 to 451,800. Once again, we observe a wide variation among the counties in the Los Angeles Basin. The Los Angeles county has the largest share of unemployed (67.2% or 303,900) in the Los Angeles Basin (Chart 2.4).¹⁴

The annual average unemployment rate in the Los Angeles Basin was 5.8% in 1998, a considerable improvement since the recession level of 9.4%. The unemployment rates vary significantly within the Basin, ranging from 6.5% in the Los Angeles county to 2.9% in Orange county (Chart 2.5).¹⁵ The unemployment rates vary considerably across race and age. According to the 1990 Census, unemployment rates for Blacks were consistently high across all age groups. In the 25-64 year age group, the unemployment rate of Blacks and

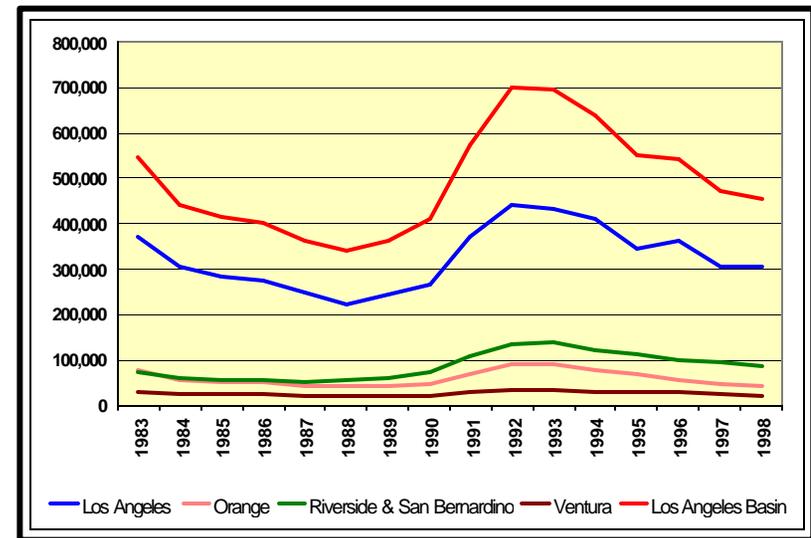
¹³ California Employment Development Department (Labor Market Information Division), *Annual Average Industry Employment, 1999 (March 1998 Benchmark)*. Data are not seasonally adjusted.

¹⁴ Ibid [7].

¹⁵ Ibid [7].

Chart 2.4

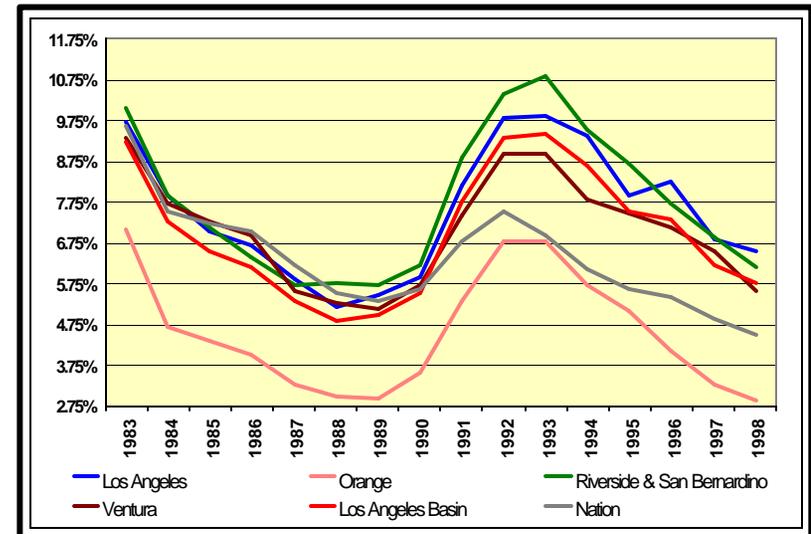
Annual Average Unemployment in the Los Angeles Basin, 1983-98



Source: California Employment Development Department, 1999

Chart 2.5

Annual Average Unemployment Rate in the Los Angeles Basin, 1983-98



Source: California Employment Development Department, 1999; and Bureau of Labor Statistics, 1999

Hispanics was significantly higher than White and Asians in all counties of the Basin (Chart 2.6).¹⁶

Industry Trends

In 1998, the three leading sectors for non-farm employment in the Los Angeles Basin included services (31%), retail trade (17%), and manufacturing (16%) (Chart 2.7). In manufacturing and wholesale trade, the Basin is above the California average of 14% and 6% respectively.¹⁷ We observe two major industry trends in the Los Angeles Basin:

- i. the gradual growth of employment in the service sector—share of service sector jobs increased from 24.3% in 1983 to 31.3% in 1998, and
- ii. a gradual decline in manufacturing jobs—share of manufacturing jobs decreased from 22.8% in 1983 to 16.5% in 1998 (Chart 2.8).¹⁸

In 1998, Los Angeles county accounted for 3.94 million jobs or 61.9% of all non-farm employment in the Basin. A majority of the service sector and manufacturing jobs are also located in the Los Angeles county. The county accounted for 64.8% of all service sector jobs, 63.7% of all manufacturing jobs and 57.1% of all retail jobs in the Los Angeles Basin (Chart 2.9).¹⁹

The California Employment Development Department (EDD) forecast that the Los Angeles Basin will add 775,600 new wage and salary jobs between 1995 and 2002, showing an overall growth

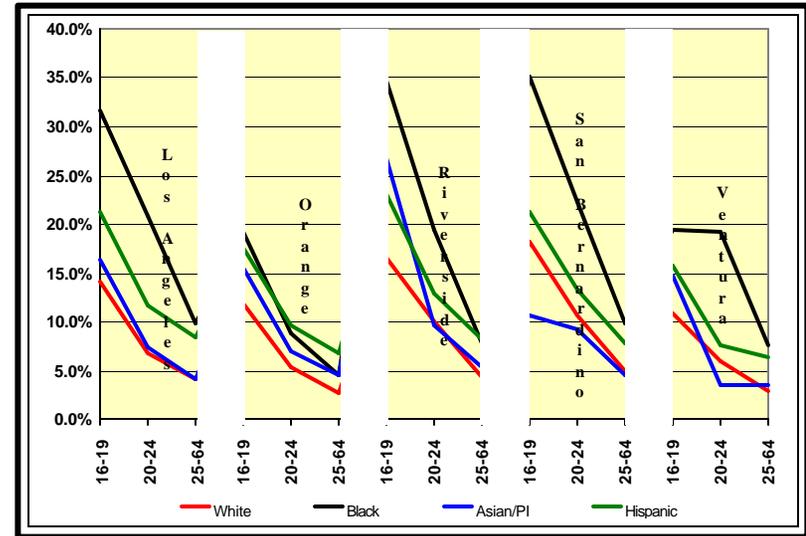
¹⁶ U.S. Bureau of the Census, *1990 Census of Population and Housing, Summary Tape File 4B*.

¹⁷ Ibid [7].

¹⁸ Ibid [7].

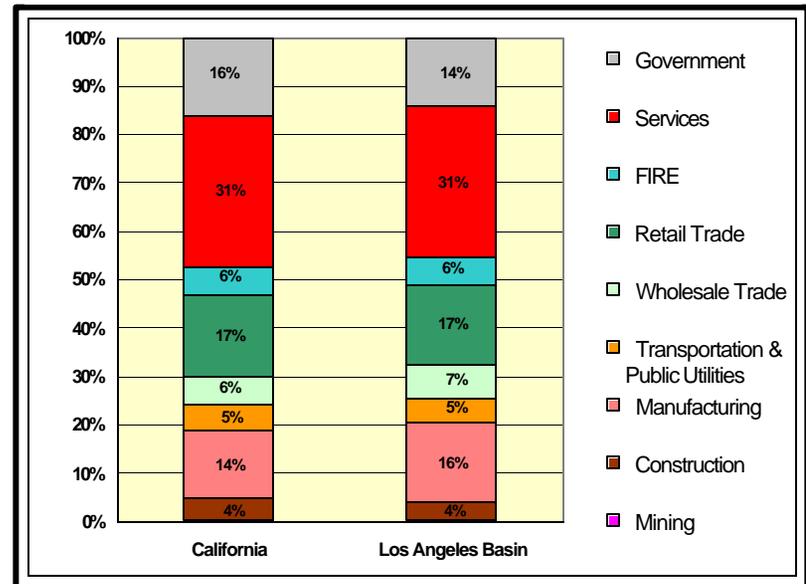
¹⁹ Ibid [7].

Chart 2.6
Unemployment Rate by Ethnicity and Age, 1990



Source: Bureau of Census, 1990; Table STF 4-B

Chart 2.7
Employment by Sector, 1998



Source: California Employment Development Department, 1999

of 14.2%. According to the forecast, all industry divisions except mining will add jobs. Industry segments that will experience significant job growth include the service sector (21%), construction (20%), wholesale trade (14%), retail trade (13%), and manufacturing (11%) (Chart 2.10).²⁰ The EDD also forecast that the job growth will be the highest in Riverside & San Bernardino (23.7% for combined PMSA), followed by Ventura (16.6%), Orange (14.8%), and Los Angeles (13.0%) counties.

2.3 Wage Rates

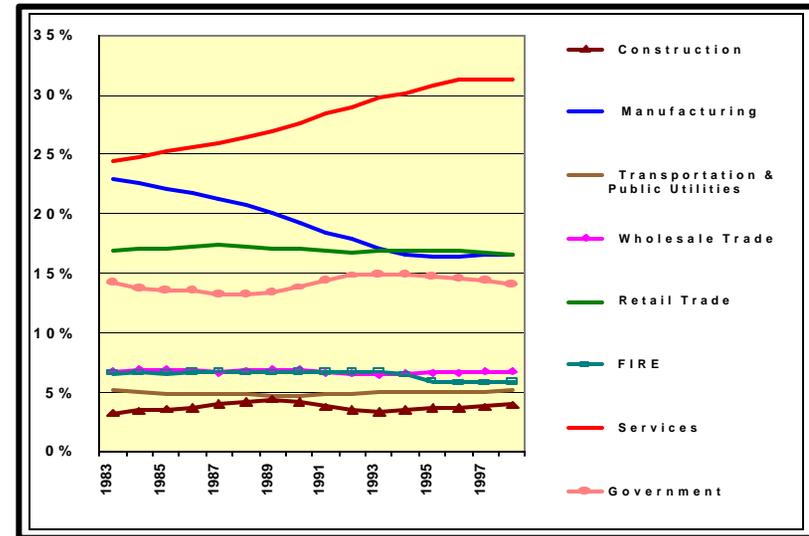
According to the National Compensation Survey (NCS) conducted by the U.S. Department of Labor's Bureau of Labor Statistics (BLS), workers' compensation averaged \$16.44 per hour in the Los Angeles Basin during January 1997. Among the three broad occupational groups, white-collar workers had the highest average pay level at \$20.49 per hour, and comprised 57% of the workers in the area. Blue collar workers averaged \$12.13 per hour and accounted for 25% of the workers, while the remaining 18% of the workers in service occupations earned an average of \$9.75 per hour (Appendix A 1).²¹

The average hourly earnings in the Los Angeles Basin varied within each broad occupational category. Average pay for white collared jobs ranged from \$35.04 per hour for financial managers to \$18.82 per hour for radiological technicians and \$9.10 per hour for receptionists. The pay for blue-

²⁰ Ibid [7].

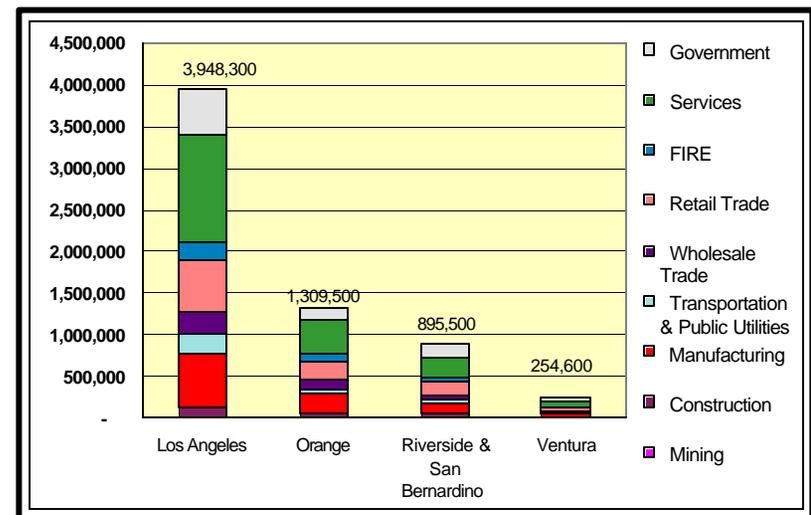
²¹ U.S. Department of Labor (Bureau of Labor Statistics), "New survey provides data on wages in the Los Angeles -Anaheim-Riverside Area," Table 1, [<http://stats.bls.gov/ro9news.htm>].

Chart 2.8
Shares of Employment by Sector, 1983-98



Source: California Employment Development Department, 1999

Chart 2.9
Employment by Sector for Los Angeles Basin Counties, 1998



Source: California Employment Development Department, 1999

collar jobs ranged from an average of \$25.44 per hour for supervisors, mechanics, and repairers to \$7.01 per hour for textile sewing machine operators. The pay for service sector ranged from an average of \$12.78 for supervisors, food preparation and service occupations to \$4.90 for waiters and waitresses.²²

The NCS survey categorizes data by selected wage characteristics, such as full/part-time status, union/non-union status, and time workers. Overall, full-time workers averaged \$17.29 per hour, while part time workers averaged \$9.51 per hour. The union workers in blue-collar jobs averaged \$15.78 per hour, while the non-unionized blue-collar workers averaged \$10.61 per hour. In the occupations related to the service sector, average hourly earnings for part-time workers (at \$6.22 per hour) and non-unionized workers (at \$7.77 per hour) were the lowest across all occupational categories (Appendix A-2).²³

2.4 Firm Sizes

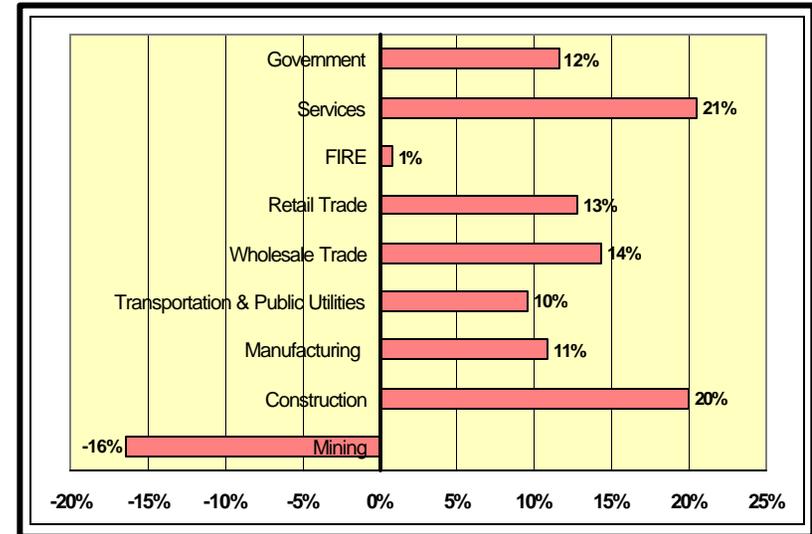
Small sized firms constitute a major economic base for the Los Angeles Basin. The Basin has a large number of small-sized firms (0-99 employees) as compared to intermediate (100-499 employees) and big sized firms (500 or more employees). In 1997, there were 259,670 firms with 0-4 employees. Firms of this size ranked the highest in the Basin (Chart 2.11).²⁴ Small sized firms with less than 100

²² Ibid [15], Table 1.

²³ Ibid [15], Table 2.

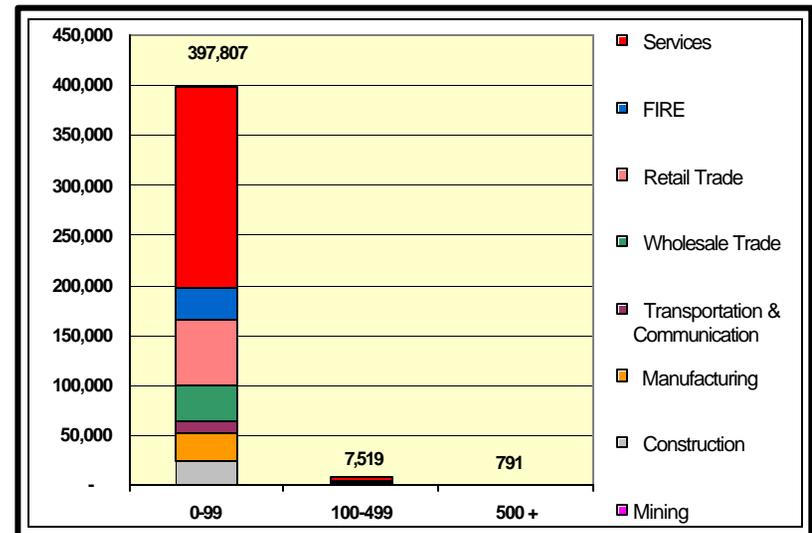
²⁴ California Employment Development Department (Labor Market Information Division), *California Unemployment Insurance Reporting Units by Size, Industry and County, Report 524*, Classified by Standard Industrial Classification Division for Metropolitan Statistical Areas (MSA), Third Quarter, 1997.

Chart 2.10
Employment Projections for Los Angeles Basin,
Percentage Change by Industry, 1995-2002



Source: California Employment Development Department, 1999

Chart 2.11
Number of Reporting Units by Size of Firm by Industry,
Los Angeles Basin, 3rd Quarter, 1997



Source: California Employment Development Department, 1999

employees numbered 397,807; intermediate sized firms numbered 7,519; and the big sized firms numbered 791.

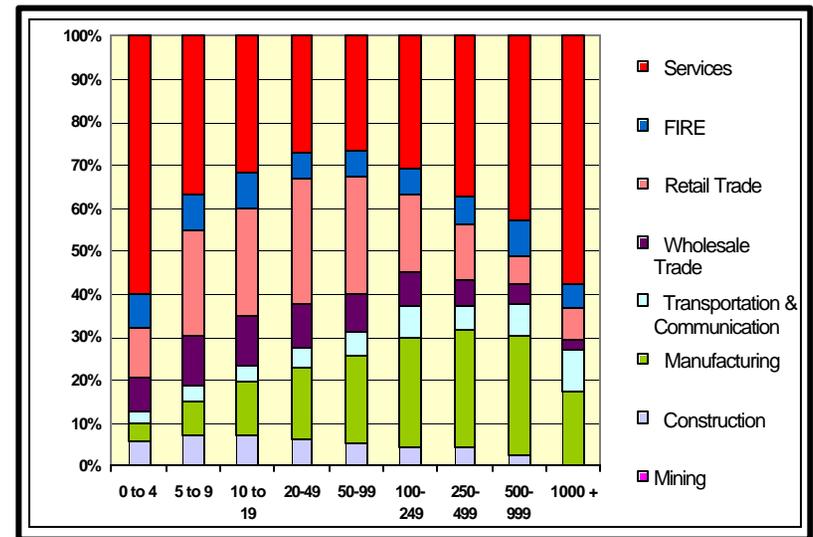
The sizes of the firms also vary by sector. In 1997:

- ◆ Approximately 60% of the firms with 0-4 employees and 1000 or more employees belonged to the service sector.
- ◆ Trade (retail + wholesale) firms are another significant part of the small and intermediate sized firms--they form between 19% to 39% of the firms employing less than 250 persons.
- ◆ Manufacturing becomes significant among intermediate and larger firm sizes--they form between 16% to 29% of the firms employing 100-249 persons or more (Chart 2.12).²⁵

Small firms and businesses are an important part of the economy of the Los Angeles Basin. However, according to the *1998 Southern California Business Climate Survey* conducted by the Los Angeles Times and USC Marshall School of Business, they face major problems in terms of excessive taxation and regulation, the lack of skilled labor force, and access to capital. The top 10 problems cited by the businesses in the survey were:

1. Federal taxes
2. State taxes
3. Availability of skilled workers
4. Local competition
5. Permits and licenses

Chart 2.12
Distribution of Reporting Units by Size of Firm by Industry,
Los Angeles Basin, 3rd Quarter, 1997



Source: California Employment Development Department, 1999

²⁵ Ibid [18].

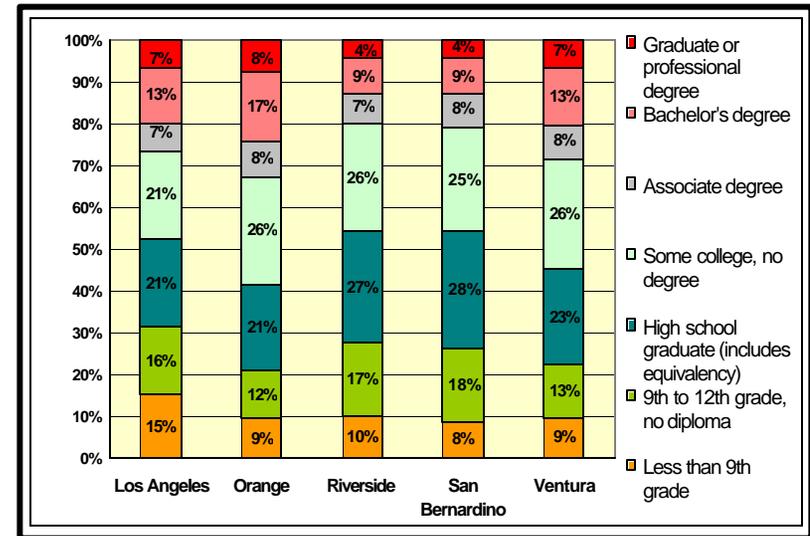
6. Health insurance costs
7. County taxes
8. Access to capital
9. City taxes
10. Property taxes

For minority (African-American and Hispanic/Latino) business owners, the top two problems were access to capital and local competition.²⁶

2.5 Education

Educational attainment is used as a proxy for the level of skills available in the Los Angeles Basin. The labor characteristics of the Los Angeles Basin vary among the counties. As described in an earlier section, the size of the labor force in the Los Angeles County outstrips the labor force in the other four counties. According to the 1990 Census, Los Angeles had above 1 million persons (nearly 20%) of 18 years age or more with bachelor, graduate, or professional degree; it also has nearly 3 million persons (nearly 30%) with less than 9th grade education or no diploma. Orange County has a smaller workforce, but a higher proportion (nearly 25%) has a bachelor, graduate, or professional degree (Chart 2.13).

Chart 2.13
Percentage Share of Educational Attainment by County
Persons 18 years or over (1990)



Source: Bureau of Census, 1990

²⁶ William B. Gartner, *Los Angeles Times – USC Marshall School, 1998 Southern California Business Climate Survey*, Los Angeles, November 1998.

3. Economic Distress in the LA Basin

According to the new Economic Development Administration Reform Act of 1998, there are three basic distress factors that determine the eligibility of an area for EDA assistance - low income, high unemployment or "special" needs. The following section identifies the areas that are eligible for EDA assistance under these criteria. The analysis is carried out at two levels: (i) counties, and (ii) the cities with 25,000 or more population in the Los Angeles Basin.

3.1 Eligibility Based on Low Per Capita Income

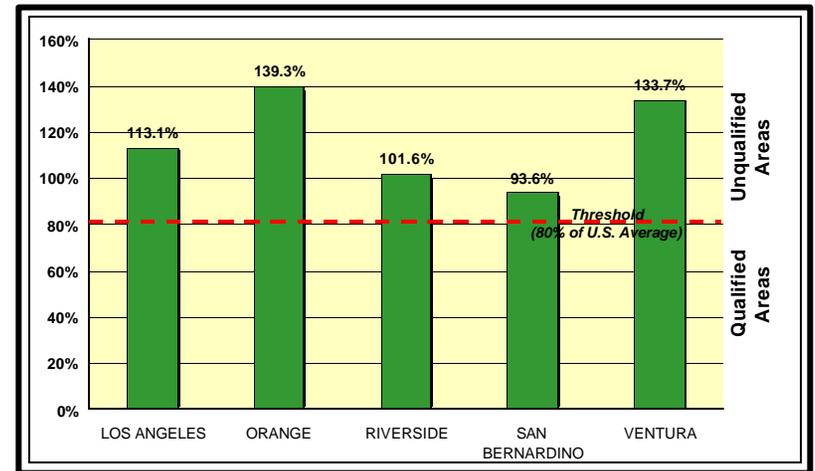
EDA uses the 1989 Per Capita Income from the 1990 Census for determining eligibility based on Per Capita Income (PCI) since it is the most recent federal data available. According to the 1990 Census, the national average PCI was \$14,277. Thus the 80 percent or less criteria establishes a threshold of \$11,421.60 as the maximum PCI for an area to qualify for assistance from EDA. An area with PCI greater than this would not qualify for EDA assistance under the low income criteria.

Chart 3.1 shows the 1989 Per Capita Income of the five counties in the Los Angeles Basin as a percentage of the U.S. National average. It is evident from the chart that the PCIs of all the counties are higher than the 80% threshold level. Hence, at the county level, no county in the Los Angeles Basin qualifies for EDA assistance under the low-income criterion.

Table 3.1 shows the cities in the various counties of the Los Angeles Basin that qualify for EDA assistance. It is evident that 18 cities are eligible for EDA assistance. Fourteen of these cities are in the Los Angeles county, two in San Bernardino county, one each in Orange and Riverside counties, and none in Ventura county. Thus, although at the

broad level, the counties are not eligible for EDA assistance, there are many areas in the cities that qualify for EDA assistance under the low income criteria. Map 3.1 shows the spatial pattern of economic distress based on low Per Capita Income criteria.

Chart 3.1
Per Capita Income of Counties in Los Angeles Basin
Percent of U.S. National Average, 1989



Source: Bureau of Census, 1990

Table 3.1
Cities in Los Angeles Basin That Qualify for EDA
Assistance
based on Per Capita Income

County	City	Per capita income	% US Avg. (\$14,277)
Los Angeles County	Bell Gardens	\$6,125	42.9%
	Bell	\$7,104	49.8%
	Huntington Park	\$7,238	50.7%
	Lynwood	\$7,260	50.9%
	Compton	\$7,842	54.9%
	El Monte	\$8,056	56.4%
	South Gate	\$8,368	58.6%
	Baldwin Park	\$8,858	62.0%
	La Puente	\$9,060	63.5%
	Paramount	\$9,429	66.0%
	Rosemead	\$9,796	68.6%
	Pico Rivera	\$10,454	73.2%
	Pomona	\$10,728	75.1%
	Azusa	\$11,038	77.3%
Orange County	Santa Ana	\$10,019	70.2%
Riverside County	Indio	\$9,244	64.7%
San Bernardino County	San Bernardino	\$10,865	76.1%
	Colton	\$10,924	76.5%
Ventura County	None		

Source: 1990 Bureau of Census; Economic Development Administration

Note: The list above reflects cities for which data was available from EDA.

Table 3.2
Cities in Los Angeles County that Qualify for EDA
Assistance
based on 24-Month Unemployment Rates (as of September 1998)

COUNTY	City	Rate
Los Angeles County	Azusa	7.6%
	Baldwin Park	7.8%
	Bell	11.4%
	Bell Gardens	12.4%
	Carson	6.6%
	Compton	13.2%
	El Monte	8.7%

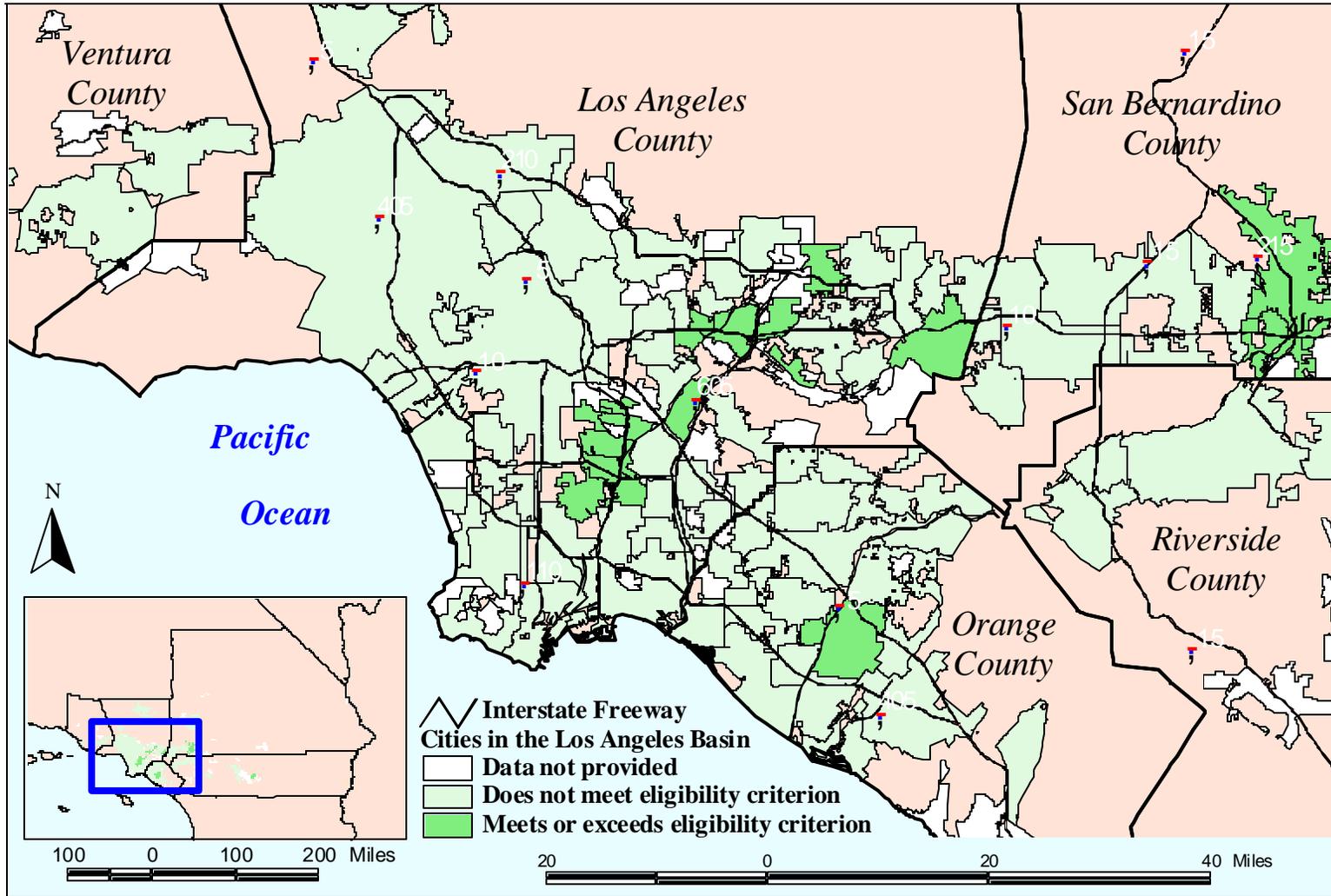
Table 3.2 (continued)

COUNTY	City	Rate
	Glendale	6.4%
	Hawthorne	6.4%
	Huntington Park	11.8%
	Inglewood	9.2%
	La Puente	8.5%
	Lancaster	6.4%
	Lawndale	6.9%
	Long Beach	6.3%
	Los Angeles	7.7%
	Lynwood	11.5%
	Maywood	11.3%
	Montebello	6.2%
	Norwalk	6.1%
	Palmdale	6.4%
	Paramount	9.1%
	Pico-Rivera	7.8%
	Pomona	8.4%
	Rosemead	7.7%

	South Gate	10.0%
	West Hollywood	6.5%
Orange County	None	
Riverside County	Cathedral City	6.5%
	Corona	6.0%
	Hemet	10.2%
	Indio	10.3%
	Moreno Valley	7.8%
	Riverside City	7.3%
San Bernardino County	Apple Valley Town	6.5%
	Colton	7.8%
	Fontana	5.9%
	Hesperia	7.4%
	Highland	7.2%
	Montclair	6.0%
	Rialto	6.5%
	San Bernardino	8.8%
	Victorville	8.3%
Ventura County	Oxnard	8.8%

Source: Bureau of Labor Statistics, 1998; Economic Development Administration

Map 3.1
Cities in the Los Angeles Basin (Five County Area)
Areas Eligible for EDA Assistance Based on 1989 Per Capita Income



Source: 1990 Census; Economic Development Administration

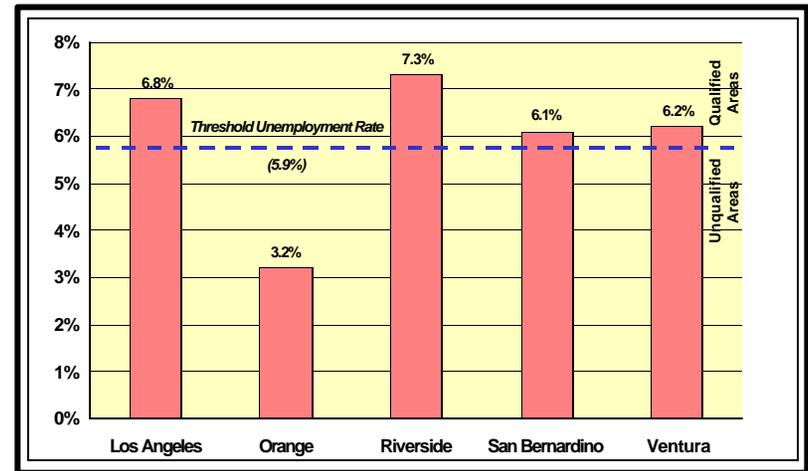
3.2 Eligibility Based on Unemployment Rates

The EDA uses the Bureau of Labor Statistics (BLS) data for determining the high unemployment rate in an area. To qualify for EDA assistance, the area's unemployment rate should be at least 1% greater than that of the U.S. national average. As of September 1998, the national average unemployment rate was 4.9%. Hence, to qualify for EDA assistance under the high unemployment criterion, the unemployment rate of the area should be at least 5.9%.

Chart 3.2 shows the unemployment rates of the counties in the Los Angeles Basin. It is evident from the chart that the unemployment rate of four counties - Los Angeles, Riverside, San Bernardino, and Ventura surpass the U.S. average. Thus four out of five counties in the Los Angeles Basin are eligible for EDA assistance under the high unemployment rate criterion. Only Orange county does not meet this criterion.

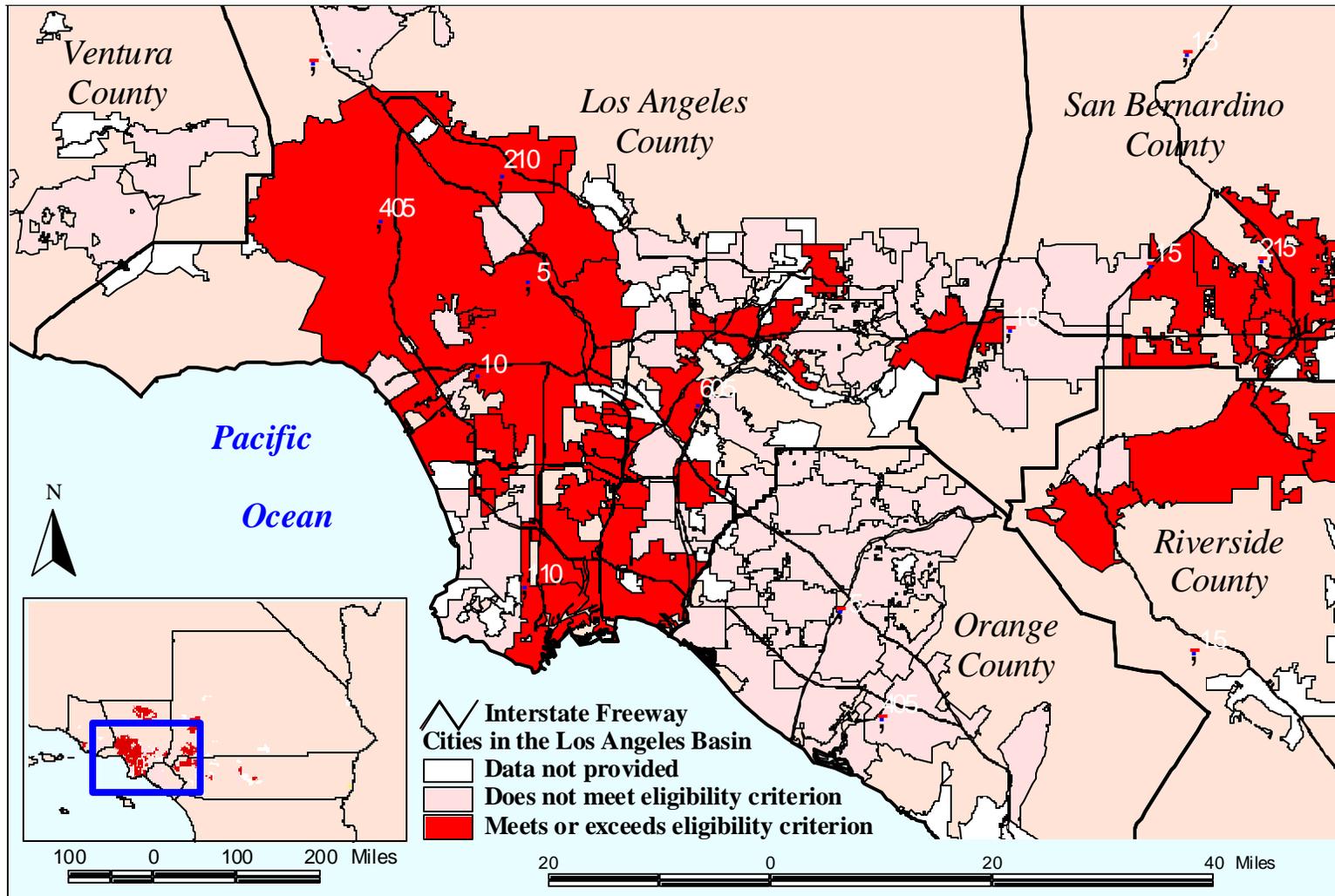
Table 3.2 shows the cities in various counties of the Los Angeles Basin that qualify for EDA assistance under the high unemployment criterion. It is evident that 43 cities qualify, of which, 27 are in the Los Angeles county, 6 in Riverside county, 9 in San Bernardino county, 1 in Ventura county, and none in Orange county. Map 3.2 shows the spatial distribution of the areas in the Los Angeles Basin that qualify for EDA assistance under the high unemployment criterion.

Chart 3.2
Unemployment Rate by Counties in the Los Angeles Basin
(as of September 1998)



Source: EDA, 1998

Map 3.2
Cities in the Los Angeles Basin (Five County Area)
Areas Eligible for EDA Assistance Based on a 24-Month Unemployment Criterion as of September, 1998



Source: Bureau of Labor Statistics, Economic Development Administration, 1998

4. Profile of EDA Projects in the LA Basin

Over the years, EDA has made significant investments to stimulate job creation in the distressed areas of the Los Angeles Basin. Since FY 1990, EDA has invested \$183,686,861 in the Los Angeles Basin. Approximately three-quarter share of this funding has gone to Los Angeles County followed by San Bernardino (10.9%), Ventura (9.3%), Orange (3.1%), and Riverside (2.5%) (Chart 4.1). The Economic Adjustment Implementation (EA IMP) accounts for 85.4% of all funding in the Los Angeles Basin, followed by Public Works (PUB WK) (11.2%), Economic Adjustment Strategy (EA STR) (2.0%), Long Term Economic Distress (LTED) (0.8%), Technical Assistance (TECH A) (0.5%), and Planning (PLANNG) (0.2%) (Chart 4.2).

Map 4.1 and 4.2 depict the spatial distribution of projects carried out by EDA in the Basin.

The following section presents a sampling of projects carried out by EDA over the past few years. This review delineates different types of projects, and their expected impacts and benefits. The list by no measure is exhaustive, nor does it demonstrate the full range of EDA program assistance. However, it briefly illustrates the activities of EDA grantees in the Basin.

Chart 4.1
EDA Funding in the LA Basin by County, FY 1990 to Present

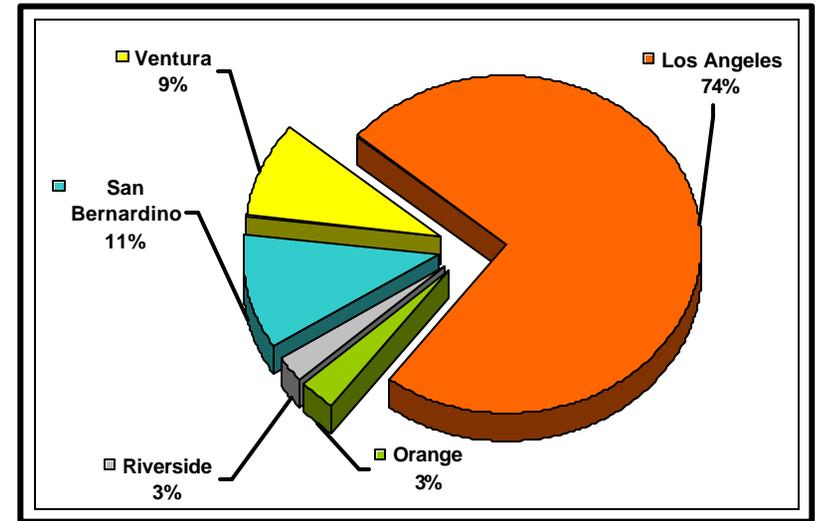
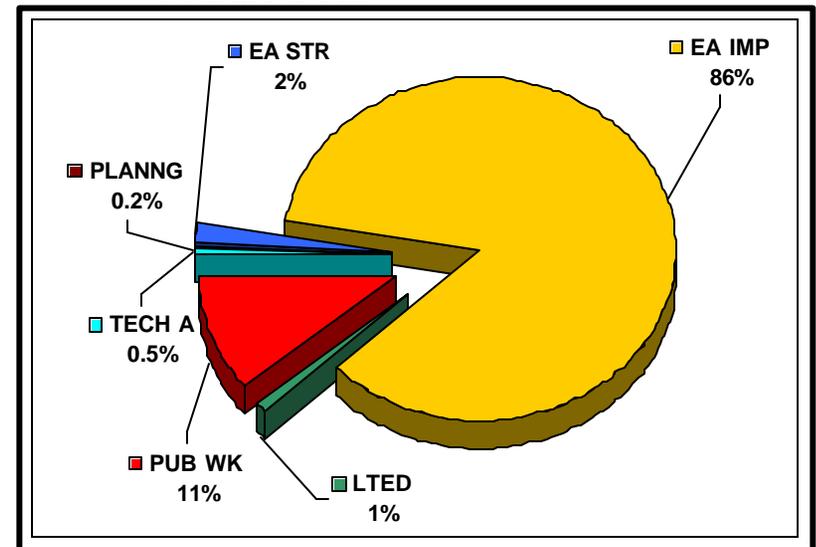
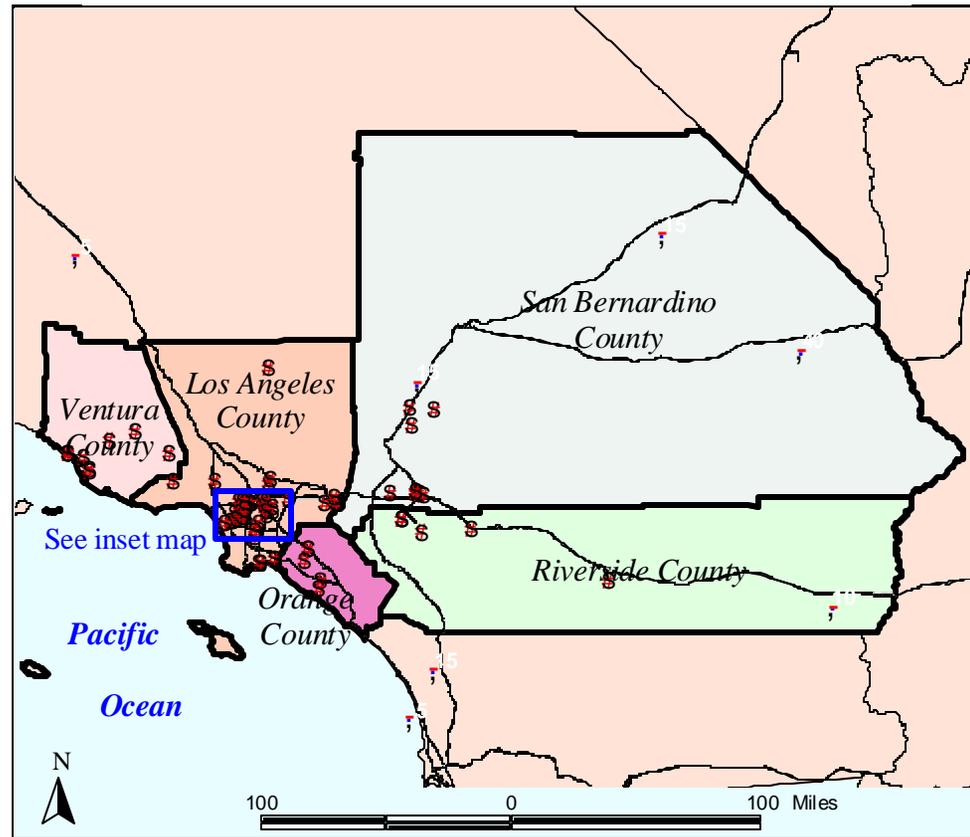


Chart 4.2
EDA Funding in LA Basin by Program, FY 1990 to Present

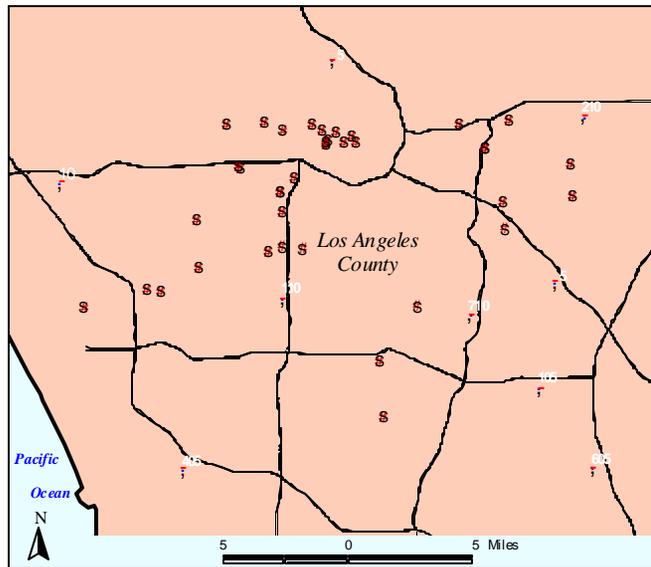


Source for Chart 4.1 & Chart 4.2: EDA Seattle Regional Office, April 16, 1999

Map 4.1
EDA Grantees in the Los Angeles Basin
EDA Grantee Database, 1994-98



Map 4.2
Inset Map of EDA Grantees in the LA Basin
EDA Grantee Database, 1994-98



Los Angeles County

FAME Renaissance Corporation

The proposed project is to renovate an existing four-story building into a business incubator. The incubator will support start-ups and spin off businesses in the entertainment industry. FAME will provide the tenants with administrative support services including entrepreneurial training, computer lab, research databases, and marketing assistance. The tenants in the incubator will also be assisted through FAME's EDA supported Revolving Loan Fund (RLF), and its micro-loan fund. FAME is in negotiation with Disney Studios and The Dream Works to access their technical expertise and assistance during the design and development of industry specific services and training. It is expected that a total of 220 jobs will be created from the start up businesses that will create opportunities for the unemployed and the underemployed residents of South Central Los Angeles.²⁷

California State University Long Beach Foundation (CSULB Foundation)

The closure of several Naval facilities and defense downsizing resulted in severe economic distress in Long Beach. The CSULB Foundation took title of a 32-acre former Naval housing site via an economic development conveyance. EDA has funded the CSULB Foundation to construct the necessary infrastructure to start the reuse of this site for economic revitalization. The facility will encourage new high-tech business formation with its incubator component (Long Beach Enterprise Center); train local work force in its CSULB on-site classrooms; and will provide over 20 net acres of light industrial land to attract high-tech



²⁷ U.S. Department of Commerce (Economic Development Administration), *Project Summary and Approval*, Locator No. NCA-1046, 1998.

business expansions to Long Beach. It is expected that at build-out, the project will create 2,900 direct jobs and contribute over \$175 million in direct revenues to the local economy. About \$55 million will be provided for new facilities through private investment by the firms locating on the light-industrial sites at the Long Beach Research and Training Center.²⁸

Los Angeles County Fair Association

The Fairplex Exposition Center at the Los Angeles County Fairgrounds in Pomona hosts expositions and international trade and consumer shows that facilitate trade and business transactions that stimulate industrial and commodities production in the Los Angeles Basin.²⁹ The proposed project will improve physical conditions within the exposition structures to a level that meets industry demands of domestic and foreign trade shows. EDA funding will procure heating, ventilating, and air conditioning (HVAC) equipment, install HVAC equipment, and install energy management systems in the Fairplex Exposition Center buildings. It is anticipated that the improvements will increase the quantity and quality of scheduled events and trading activity. The increased event activity at Fairplex will generate 611 jobs and save 207 jobs in the local economy.

Fairplex Exposition Center



²⁸ U.S. Department of Commerce (EDA), *Project Summary and Approval*, Locator No. NCA-0933.01, 1997.

²⁹ U.S. Department of Commerce (EDA), *Project Summary and Approval*, Locator No. ACA-0999, 1997.

Orange County

City of Anaheim

EDA's assistance will provide infrastructure improvements, such as, entrance roads, street improvements, traffic lights, sewer lines, water lines and appurtenances, right-of-way acquisition, and landscaping to the 30-acre site of the former Rockwell International Defense plant. These improvements will permit the site to be developed and marketed as a high-tech manufacturing and technology park for light manufacturing firms with emphasis on research and development companies. It is anticipated that the Anaheim Technology Center will create several hundred high paying and skilled jobs. It will also result in job training programs, outreach, job placement, and tax benefits for all beneficiaries locating in the business park. In addition, tenants will be drawn from EDA assisted incubators in the Los Angeles Basin. Furthermore, all parties will use an EDA supported employment plan or first source hiring agreement.³⁰

Anaheim Technology Center



³⁰ U.S. Department of Commerce (Economic Development Administration), *Project Summary and Approval*, Locator No. NCA-1010, 1997.

Riverside County

City of Riverside

The proposed project will facilitate the efficient use of two large parcels of commercial land being developed by the Riverside Redevelopment Agency. While one parcel will accommodate a neighborhood shopping center, the other parcel will be a mixed-use project, a combination of retail and office space. EDA funding will help construct access and storm drainage improvements in the public rights-of-way to benefit the retail and mixed-use projects. Improvements will include street work, medians, signals, utilities, storm drains, a retention basin, and landscaping. It is anticipated that the tenants in both the projects will employ 293 new hires within two years of project approval and 510 by the fifth year.³¹

San Bernardino County

City of Victorville (Victor Valley Economic Development Authority; Victor Valley Water District)

The purpose of this grant is to provide the necessary infrastructure to realize the highest and best use for the former George Air Force Base (AFB). EDA funding will help construct on-site access improvements, water system improvements, sewer system improvements, and acquire navigational aids. The proposed infrastructure improvements

³¹ U.S. Department of Commerce (Economic Development Administration), *Project Summary and Approval*, Locator No. A-CA-0942, 1996.

are critical to the conversion of George AFB to a domestic, commercial airport, and the jobs thus created..³²

Ventura County

County of Ventura

During the recent recession (1990), Ventura County lost over 14,600 defense-related jobs due to defense downsizing. The county had a pressing need to implement strategies to counter the downsizing of the defense economy by accelerating economic growth, assisting defense contractors and employees to increase participation in commercial markets, and nurturing and expanding several selected targeted business clusters. EDA funded the County of Ventura to implement a defense economic conversion strategy—the Ventura Defense Partnership—to assist in the formation of a number of business/industry cluster networks, and to administer an RLF with additional funding from EDA. The strategy assisted in the implementation of defense-related industries converting to the commercial market place. In addition, the strategy helped diversify the economy by creating new jobs equivalent in skills and pay to the defense-related jobs that were lost.³³

³² U.S. Department of Commerce (Economic Development Administration), *Project Summary and Approval*, Project No. 07-49-02722, 1994.

³³ U.S. Department of Commerce (Economic Development Administration), *Project Summary and Approval*, Project No. 07-49-04115, 1996.

5. Strategies of Economic Development in the Los Angeles Basin

5.1 Economic Development Strategies

EDA's funding priorities during FY 1999 include, among other:

- ◆ *Sustainable development which will provide long-term economic development (e.g., diversification of natural resource dependent economies, eco-industrial parks, aqua-culture facilities, and brownfields' redevelopment) benefits without compromising the environment for future generations;*
- ◆ *The commercialization and deployment of technology; particularly information technology and telecommunications, and efforts that support technology transfer, application and deployment for community economic development. Also included under this category would be projects that support the development of new technologies and techniques (e.g. innovative material recycling or reuses, pollution control or treatment processes, and flood mitigation) that significantly enhance an area's economic development potential;*
- ◆ *Projects that support locally created partnerships that focus on regional solutions for economic development will be given priority over proposals that are more limited in scope. For example, projects that evidence collaboration in fostering an increase in regional (multi-county and/or multi-state) productivity growth will be considered to the extent that such projects demonstrate a substantial*

*benefit to economically distressed areas of the region.*³⁴

The above funding priorities reflect an emphasis on sustainable development, technology-led economic development (use of information technology, environmental and manufacturing technologies, technology transfer facilities, and other new technologies) and regional collaboration for alleviating economic distress.

In the context of sustainable development, manufacturing plays a significant role in the Los Angeles Basin. The re-industrialization strategy of the Basin—a strategy to create family wage jobs in the economically distressed areas—is intricately tied to the notion of sustainable development. The paper contends that the Los Angeles Basin's continued economic recovery and economic health is dependent on our ability to generate new higher-paying, higher-value manufacturing jobs. EDA's technology-based development dovetails into this strategy due to their inter-relationship in increasing value and productivity. Effective implementation of these approaches to alleviate distress at the local level require collaboration and a regional strategy at the local, county, and the state level.

5.2 Sustainable Development

Sustainable development is a strategy through which communities seek environmentally benign economic development approaches to improve the quality of life. Traditional approaches to planning and development have had unintended consequences in creating additional societal and environmental problems, rather than solving them. Such

³⁴ Department of Commerce (Economic Development Administration), "Economic Development Assistance Programs—Availability of Funds under Pub. L. 105-393," *Federal Register*, Volume 64, No. 36, February 24, 1999, p. 1.

traditional approaches have led to congestion, urban sprawl, pollution, and over-consumption of resources. Sustainable development recognizes the symbiosis of economic growth and environmental sustainability.³⁵

Sustainability is the [emerging] doctrine that economic growth and development must take place, and be maintained over time, within the limits set by ecology in the broadest sense - by the interrelations of human beings and their works, the biosphere and the physical and chemical laws that govern it . . . It follows that environmental protection and economic development are complementary rather than antagonistic processes.³⁶

The sustainable development approach also provides a framework that allows communities to use resources efficiently, create efficient infrastructure, protect and improve the quality of life, and grow new businesses to strengthen their economies. This approach can help sustain our generation, create healthy communities, and protect and promote intergenerational equity.

A range of activities that support sustainable development strategies are underway across the federal government. Examples include inter-agency collaboration between EDA, U.S. Departments of Commerce, Energy, Agriculture, Environmental Protection Agency, President's Council on Sustainable Development, Council on Environmental

Quality, and Office of Science and Technology Policy.³⁷ Multi-disciplinary and integrated approaches are being adopted by these agencies in fulfilling their missions and developing new partnerships with other agencies (federal, state, and local), businesses, non-governmental organizations, academic institutions, and communities to make the most of available resources.

A key part of a local economic development strategy is the promotion and encouragement of businesses and industries that are at the forefront of environmental economic development opportunities. EDA has played a significant role in supporting innovative environmental technology projects providing support for such projects in 35 of the 50 states.³⁸ Examples include:

- ◆ Environmental Training and Technology Center on a brownfield site, Dallas, Texas
- ◆ Sustainable Technology Industrial Park in Port of Cape Charles, Virginia
- ◆ Recycling Research Center at Stevens Institute of Technology, Hoboken, New Jersey
- ◆ Ocean Technology Research Center at the University of Rhode Island, Narragansett
- ◆ Composite Materials Research Center at the University of New Hampshire, Durham

The adoption of environmentally benign technology in the traditional industries like manufacturing is important in

³⁵ Center of Excellence for Sustainable Development, "Center of Excellence for Sustainable Development: Overview Introduction," [<http://www.sustainable.doe.gov/overview/ovintro.htm>].

³⁶ William D. Ruckelshaus, "Toward a Sustainable World", *Scientific American*, September 1989.

³⁷ President's Council on Sustainable Development, "The Road to Sustainable Development: A Snapshot of Activities in the United States," [<http://www.whitehouse.gov/PCSD/Publications/Snapshot.html#WH>], March 1997.

³⁸ U.S. Department of Commerce (Economic Development Administration), *FY 2000 – Technology Infrastructure Initiative*, 1998, p. 2.

the context of Los Angeles Basin. Manufacturing has played a leading role in the region and has a large employment base.

5.3 Manufacturing Based Development

A wealth of theoretical and empirical research supports that manufacturing is an engine of economic growth. Manufacturing's share of the national GDP has remained remarkably stable at 20-23% for more than 45 years due to higher productivity gains and technological advances.³⁹ An analysis of inter-industry output and employment linkages reveals manufacturing's ability to generate increasing returns in advanced economies. Manufacturing tends to support more variety in production than non-manufacturing industries. Furthermore, evidence on manufacturing shows

...that manufacturing industries are important developers and disseminators of technology; that this phenomenon is neither accidental nor transitory, but related to the nature of manufacturing itself; and that the technology generated by manufacturing industries is a major determinant of national economic growth.⁴⁰

Job Creation and the Multiplier Effect

The manufacturing sector is a powerful source and a principal arena of growth and change. Export driven manufacturing creates high-paying jobs, attracts new entrepreneurs, strengthens the local tax base, and fields a

competitive workforce.⁴¹ The multiplier effect and economic benefits of manufacturing can be summarized as follows:

- ◆ Manufacturing creates 2.5 additional jobs for every new manufacturing job. Manufacturing jobs generate four and one-half times more secondary employment than retail jobs.⁴²
- ◆ Manufacturing activity generates increased employment – on average, each \$1 million in final sales in manufacturing is associated with 13.6 jobs in manufacturing compared to 8.4 jobs in other sectors such as raw materials and services.⁴³
- ◆ Manufacturing has a strong multiplier effect on the economy – a final sale of \$1 in manufacturing results in increase of \$2.30 in the overall economic output, as compared to an increase of \$1.62 due to final sale of \$1 in services.⁴⁴
- ◆ Manufacturing stimulates economic activity 1.5 times more than services, 1.3 times more than mining and extractive industries, and 1.15 times more than construction.⁴⁵
- ◆ Manufacturing productivity, measured in terms of output per unit of labor and capital is 6 times greater than productivity in the non-farm business sector overall.⁴⁶
- ◆ Each \$1 billion in new manufactured exports creates approximately 17,000 new jobs.⁴⁷
- ◆ When compared with non-exporters, export-oriented plants grow jobs 18% faster, are 10% less likely to go out

³⁹ David B. Bowes, *Creating Globally Competitive Community*, Partners for Livable Communities: Washington, D.C., 1997, p. 12.

⁴⁰ U.S. Department of Commerce (Economics and Statistics Administration, Office of Business and Industrial Analysis), *Engines of Growth: Manufacturing Industries in the U.S. Economy*, July 1995, p.11.

⁴¹ Ibid [6], p. 9.

⁴² Ibid [6], p. 10.

⁴³ The Manufacturing Institute, *The Facts About Modern Manufacturing*, 4th Edition, Washington D.C., p. 5.

⁴⁴ Ibid [10], p. 4.

⁴⁵ Ibid [6], p. 10.

⁴⁶ Ibid [6], p. 12.

⁴⁷ Ibid [6], p. 10.

of business, pay on average 15% more, and provide benefits that are 40% higher.⁴⁸

Programs focused on providing assistance and resources for the advancement of technological innovation within the manufacturing sector help companies achieve productivity gains in output per worker while growing their economy. Since 1960, productivity gains in manufacturing have increased by 285% versus 188% in the private non-farm economy. This has led many to believe that “since productivity accounts for more than half of all economic growth, manufacturing productivity has been responsible for an important share of the [maintenance and] growth of the entire economy since 1960.”⁴⁹

There is no denying the fact that investment in computers and related high-technologies yield higher productivity gains. However, improvements in computer and related technologies also help to raise the quality of goods and lower costs through process improvements. Manufacturing process improvements include: computer-aided design (CAD) that allows designers and engineers to develop new products on computers and transmit plans directly to the factory floor; computer-aided manufacturing (CAM) to produce precision products using statistical quality control (SQC) to reduce defect rates; and just-in-time inventory controls which lead to more efficient deliveries and minimize delivery cycles.⁵⁰

Economic development programs focused on providing assistance and linkages to resources should target small and mid-sized manufacturing companies. While the national employment level in large manufacturing companies (500 employees and above) decreased by 2.4 million in the period between 1967 and 1992, employment in smaller manufacturing companies with 500 or fewer employees grew

⁴⁸ Ibid [10], p. 22.

⁴⁹ Ibid [10], p. 6.

⁵⁰ Ibid [10], p. 12-15.

by 1.7 million over the same time period.⁵¹ As of 1993, 31 percent of manufacturing establishments provided formal job-skills training for production workers versus a national average of 17.4 percent.⁵² Moreover, large companies are “outsourcing” bigger contracts to the smaller firms. As a result, smaller manufacturers are becoming “design-and-development” partners of the large manufacturing companies with the potential for expansion.⁵³

5.4 Manufacturing: A Key Economic Sector in the Los Angeles Basin

According to the Los Angeles County Economic Development Corporation’s (LAEDC) Manufacturing Report (1998), the Los Angeles Basin ranks fourth in the nation in terms of employment in manufacturing after California (including the Los Angeles Basin), Ohio and Texas, and is ahead of Illinois, Michigan, and Pennsylvania. In 1997, the Los Angeles county ranked as the “number one” manufacturing center among metropolitan statistical areas, based on employment in the United States. The largest concentration of manufacturing employment within Los Angeles County is in South Central Los Angeles—where economic distress is acute—followed by San Gabriel Valley. The manufacturing employment base of South Central Los Angeles is 131,333 which is larger than that of Indianapolis (127,500) and San Diego (122,100).⁵⁴

Most of the manufacturing establishments in the Los Angeles Basin are small businesses. According to the California Employment Development Department, in the 3^d quarter of 1996, of the 29,924 manufacturing establishments,

⁵¹ Ibid [6], p. 13.

⁵² Ibid [10] p. 27.

⁵³ Ibid [6], p. 12.

⁵⁴ Los Angeles Economic Development Corporation, *Manufacturing in Los Angeles*, August 1998, pp. 1-14.

99.3% of them had less than 500 employees; while 92.8% of the establishments had fewer than 100 employees. Establishments with 0-4 employees numbered 10,817.⁵⁵

As discussed in Section 2.3, wage rates for manufacturing are higher than service sector occupations. According to the National Compensation Survey (1997), the mean hourly earnings for full-time blue collar workers in precision production, craft, and repair occupations (\$17.81 per hour) is significantly higher than the service sector (\$10.78 per hour) in the Los Angeles Basin.

Manufacturing within the Los Angeles Basin has been given a bad reputation due to the perception of low wages and poor working conditions. However, in reality, manufacturing in the Los Angeles region is “an interesting array of activities that can turn out a space satellite, the latest fashion item, or a complicated piece of metal fabrication.”⁵⁶ Despite the defense downsizing and decline in aerospace jobs, the Los Angeles Basin still has a major manufacturing base. While it is not a panacea, manufacturing promises substantial economic recovery and health of the economically distressed communities in the Los Angeles Basin. Manufacturing holds significance for the Los Angeles Basin since:

- ◆ It provides a strong economic base.
- ◆ The manufacturing base is primarily export-oriented – it brings in new money to the local economy and creates wealth in the communities.
- ◆ On average, manufacturing jobs pay higher than service sector occupations.

⁵⁵ California Employment Development Department (Labor Market Information Division), *Annual Average Industry Employment*, March 1998 Benchmark, 1999. Data are not seasonally adjusted.

⁵⁶ Ibid [21], p. 1.

- ◆ The economic multiplier of manufacturing jobs is high.
- ◆ There are important linkages between the manufacturing and service sector occupations. The introduction of technology, and other clean manufacturing processes allows the industries to remain cost-competitive, and environmentally compliant. An example is the technology’s application in the apparel manufacturing process. This has made the small producers efficient, and cost-competitive. The role of technology and its deployment for community development is discussed in Section 5.8.

5.5 Re-industrialization of the Los Angeles Basin

Investments in 21st century clean modern manufacturing infrastructure such as eco-industrial parks that rely on the principles of sustainable development along with the utilization of the state of art technologies promise to have the “most bang for the buck.” They will not only meet EDA goals of creating higher value family wage jobs but will also create healthy sustainable communities. While other areas in the nation, such as Cape Charles, Virginia, Brownsville, Texas, Chattanooga, Tennessee have embarked upon this process of economic revitalization, the time is ripe for the Los Angeles Basin to launch an industrial renaissance.

This re-industrialization strategy recognizes Los Angeles Basin’s assets of a highly productive workforce, diversified economic base, world class transportation infrastructure and institutions of higher learning, design/build capability, and entrepreneurial spirit as being second to none. However, this strategy will depend on how the Basin addresses issues that will shape future trends of manufacturing. These issues include: availability of industrial sites and brownfields redevelopment.

Availability of Industrial Sites/Industrial Space

The lack of competitive industrial space/sites is a major concern in Los Angeles and Orange counties. The demand for industrial space has outstripped the supply in Los Angeles county. During the first quarter of 1998, the industrial vacancy rate was 5.3% for Los Angeles county - down from a high of 13.3% in 1993.⁵⁷ In the “central LA” market, a sub-market of the Los Angeles County, industrial vacancy rates had dipped to 3.93% by the fourth quarter of 1998.⁵⁸ The low vacancy rate indicates the tightness in the “central LA” industrial market.

In addition, concentration of manufacturing in Los Angeles county is in the older areas that are often plagued with problems of absentee ownership, small parcel size, poor transportation access (lack of turning radius for big rigs, trucks etc.), and “brownfields” related issues. The problem is compounded by the lack of support to redevelop these sites into modern industrial sites by neighboring residents, and the cities’ desire to support retail development in order to generate larger tax revenues.⁵⁹ According to the LAEDC, Los Angeles County needs to “make available at least 1,200 acres of new industrial land annually to satisfy current demand, including the needs of our existing high-growth manufacturing companies. Failure to meet such demand could result in loss of over \$700 million annually in high value manufacturing wages to our economy and people. Over five years, this could amount to \$10 billion of lost wages in Los Angeles county.”⁶⁰

⁵⁷ Ibid [21], p. 5.

⁵⁸ Los Angeles Economic Development Corporation, *The Need for Competitive Industrial Sites in Los Angeles County* [mimeo].

⁵⁹ Ibid [21], p. 18.

⁶⁰ From Los Angeles Economic Development Corporation, *Reindustrialization Strategy of Los Angeles County* [mimeo], March 25, 1999, p. 1-2.

According to Gateway Cities Partnership—a regional economic collaborative of 27 cities in the Southeast Los Angeles county—many of the cities along the Alameda Corridor contain industrial properties that are vacant or underutilized, and are not suitable for modern manufacturing plants.⁶¹ Moreover, the prospect of dealing with contaminated land and buildings discourages developers and manufacturers from reusing these sites and locating new facilities in the region.

Brownfields Redevelopment

The availability of first class industrial space is a key to attracting and retaining new manufacturers in the region. The recycling and redevelopment of dysfunctional real estate and brownfield sites is critical for the creation of value-added manufacturing, new businesses, and jobs. According to the California Center for Land Recycling, there are at least 400,000 recyclable sites in the nation, and more than 38,000 are in California. According to conservative estimates, the total acreage of brownfields is 5-10% of the nation’s total urbanized area with some metropolitan areas hosting a greater percentage share than others.⁶² Contamination presents an obstacle for redevelopment. Other factors impeding redevelopment include: environmental liability risks, uncertainty and cost, complicated and confusing regulatory requirements, difficulty in obtaining project financing, community opposition (e.g. NIMBYism), and competition from rural and urban greenfields.

However, these tracts of land with ‘diminished value’ present great opportunities for redevelopment. Public-private partnerships in California have tackled land recycling at a

⁶¹ Gateway Cities Partnership, Inc., *Business Plan, Fiscal Year 1998/1999*, November 1, 1998, p. 8.

⁶² California Center for Land Recycling, *Land Recycling and the Creation of Sustainable Communities: A Strategy for Ensuring Prosperity and Quality of Californians in the 21st Century*, 1998, p. 21.

large scale. An example of such a partnership is the Marina Village in Alameda, which was built over 13 years and won the Urban Land Institute's 1991 Award for Excellence.⁶³ It included the conversion of a former ship building yard into a 206-acre mixed-use development with residential, office, research and development facilities, school, restaurant facilities, and a yacht club.

Another example is the Los Angeles Brownfields Program, which aims to achieve inner city revitalization by linking redevelopment with environmental protection and by capitalizing on existing partnerships. The program is a collaborative effort among the Community Redevelopment Agency, Environmental Affairs Department, Mayor's Office of Economic Development and the Environmental Protection Agency. Local partners include Mothers of East Los Angeles Santa Isabel, the Conservation Corps, and Occidental College.

The Brownfields Program is part of a strategic plan to maximize opportunities created by the Alameda Corridor project. The plan seeks to improve traffic patterns, reduce congestion, improve air quality, and enhance the area's marketability. Two areas have been targeted by the city for its showcase effort:

- i. A prison site which is a 20-acre parcel of vacant contaminated property owned by the state, and
- ii. The South Central Renaissance Industrial Park (SCRIP), a partially contaminated 208-acre industrial area surrounded by residences.

Both the sites are located in the Federal Supplemental Empowerment Zone and the State Enterprise Zone and exhibit a high degree of economic distress (40% poverty rate

⁶³ Ibid [29], p. 22.

and 18.4% unemployment rate).⁶⁴ The city anticipates the creation of 2,300 permanent jobs from the redevelopment of the two sites.

The Brownfields Program intends to bring the prison site into productive use. The site is zoned for heavy industrial use and is located at the northern terminus of the Alameda Corridor where it can serve truck traffic transporting cargo to and from seaports. The existing industrial properties near the prison site are small and lack modern docking facilities. There is an opportunity for industries to expand and take advantage of the modern facilities.

The SCRIP area is "blighted" and under-utilized. It is occupied by 325 small businesses that employ 1600 people. Since several parcels are contaminated, it has posed problems for local businesses to obtain financing for expansion and hindered efforts to attract new businesses into the area. It is expected that the redevelopment will improve employment opportunities and basic shopping amenities for the residents.⁶⁵

The Los Angeles Basin is rightly positioned to take advantage of the Brownfields Redevelopment Initiative, which is a funding priority of EDA, and other federal, state and local agencies. Effective approaches in this context include voluntary clean-up programs, risk-based clean up, community driven decision making, liability minimization, partnerships that leverage private investment with public resources, redevelopment incentives, and the involvement of non-profit organizations in the planning process.⁶⁶

⁶⁴ U.S. Environmental Protection Agency, "Brownfields Showcase Community - Los Angeles, CA," [http://www.epa.gov/swerosps/bf/html-doc/losan_sc.htm], March 1998.

⁶⁵ Ibid [31].

⁶⁶ Ibid [29], p. 23.

5.6 Sustainable Re-Industrialization Strategies

The environmental technologies promise cleaner traditional industries and an important opportunity to create jobs in the future. According to the President's Council on Sustainable Development (PCSD), *Sustainable America: A New Consensus for Prosperity, Opportunity and a Healthy Environment for the Future* (1997):

Strategies include investments in resource efficiency to improve the profitability of small businesses, using the solid waste stream to develop community-based recycling businesses, supporting eco-industrial parks, and targeting the benefits of increased efficiency to create economic opportunity and social equity. A systems approach to community-wide economic development promotes maximum resource and energy efficiency of businesses, the community and the region. Economic growth is achieved and human needs are met with improved efficiency and environmental performance.

The convergence of manufacturing with sustainable development approaches such as eco-industrial parks, brownfields redevelopment, with the utilization of state-of-the-art environmental technologies promise an effective strategy for relieving economic distress in the Los Angeles Basin. The following section outlines the significance of eco-industrial parks as a part of a larger strategy to re-industrialize the Basin.

5.7 Eco-Industrial Parks

The eco-industrial park is “a group of businesses that work together and with the community to efficiently share resources (materials, water, energy, infrastructure, natural habitat, and information), enhance economic prosperity, and improve the environment.”⁶⁷ It is based on a systems design approach, in which the waste generated by one industry becomes another industry's feedstock. This closed-end industrial ecology systems approach ensures that raw materials are recycled or disposed of efficiently and safely.

This approach to industrial development has several advantages. It minimizes waste, prevents pollution, provides opportunities for new businesses and industries (e.g. recycling related manufacturing), creates jobs and revenues from recycling collection and processing, generates high-skill better-paying manufacturing jobs (vis-à-vis service sector), raises sales revenue from the manufacture of recycled products, and conserves landfill space.⁶⁸

Eco-industrial parks can be classified into three broad categories:

- ◆ *Zero emissions eco-industrial park*
- ◆ *Virtual eco-industrial park*
- ◆ *Eco-development*

Zero-emissions eco-industrial parks are parks where a group of industries or businesses locate and work together to minimize or eliminate emissions and wastes. Strategies include the re-use and recycling of materials, water and energy among the plants in the park, information sharing, design and construction of buildings in the facility, and the physical layout of the park to maximize environmental and

⁶⁷ Ibid [4].

⁶⁸ President's Council on Sustainable Development, *Sustainable America: A New Consensus for Prosperity, Opportunity and a Healthy Environment for the Future*, February, 1996.

economic efficiency. Zero emissions industrial parks can be created by bringing together companies whose processes do not generate waste or emissions, or by co-locating companies so that one company's waste product is another company's raw material.⁶⁹

An example of such a project is the *Port of Cape Charles Sustainable Technologies Industrial Park (STIP)*, which was initiated as a component of the redevelopment strategy in Eastville, Northampton County, Virginia. It is the result of an innovative partnership of local, federal, private investors and stakeholders. The project is supported by the U.S. Department of Commerce, EDA, National Oceanic and Atmospheric Administration, U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Department of Interior, U.S. Fish and Wildlife, and other state and local funding agencies.

STIP has received national acclaim for its strategies to fight economic decline through the elimination of waste and pollution. Northampton County was facing severe economic and social problems since the major industries had suffered steep declines—between 1988 to 1992, employment had fallen by 6 percent and wages had declined by 11 percent. According to the 1990 census, 27 percent of the County's 13,000 inhabitants lived below the poverty line.⁷⁰

A key component of the park is water recycling among the resident companies by means of a used-water collection system, a water recovery facility, and a recycled-water distribution system. Furthermore, a technical panel was proposed to analyze and determine the use of by-products of existing and/or new industries by other companies within the

⁶⁹ Smart Growth Network, "Smart Growth Network – Eco-Industrial Parks," [http://www.smartgrowth.org/subtopics/dev_ecoind.html], February 11, 1999.

⁷⁰ Centre of Excellence for Sustainable Development, "Sustainable Business – Success Stories," [http://www.sustainable.doe.gov/success/northam.html].

park.⁷¹ The industrial component (partially designed by the community as a part of a comprehensive Sustainable Development Action Strategy) incorporates mixed-use development and a nature preserve working toward a zero-emissions design.

The STIP is expected to attract national and multi-national businesses committed to both profitability and environmental integrity. An example is the Solar Building Systems Inc., a manufacturer of photovoltaic energy equipment. Currently, efforts are being focused on recruiting compatible companies and developing effective processes to manage the park as an industrial eco-system.⁷²

Virtual eco-industrial park is a park where geographically separate group of industries collaborate to minimize their impact on the environment. By creating partnerships, companies in a virtual park can create economies of scale, e.g. cooperative buying of goods with a higher recycled content, or hiring a shared engineering efficiency expert or a compliance auditor. If clustered companies are co-located in the same region, they can benefit from reduced transportation costs, whether the firms are industrial, retail, or commercial. The companies affiliated in the waste exchange network will pay lower prices for secondary raw materials and realize savings in hazardous waste disposal charges. Integrated waste sharing and cooperative product design may also result in additional savings.⁷³

An example of such a project is the *Brownsville Eco-Industrial Park*, Brownsville, Texas. Brownsville is considered to be one of the three top bird watching sites in

⁷¹ Ibid [4].

⁷² Smart Growth Network, "Smart Growth Network Case Study: Port of Cape Charles Sustainable Technologies Industrial Park," [http://www.smartgrowth.org/casestudies/ecoin_cape_charles.html].

⁷³ Ibid [36].

the United States. However, the city is plagued with serious environmental and economic problems (43.9% poverty rate and 11.72% unemployment rate).⁷⁴ The eco-industrial park was envisioned as a prototype to develop and diffuse innovative, cost-effective technologies and practices that could promote sustainable industrial development along the U.S.-Mexico border.

The Brownsville project is based on a regional approach to exchanging waste materials and by-products (a regional "industrial symbiosis" approach). Although the project could eventually include businesses that are located together, co-location of industries or businesses is not the driving force. The project includes industries, small businesses, and the agriculture sector.

With the assistance of Bechtel Corporation, a detailed computer modeling of regional material and energy flows is being used as a way to identify potential materials exchanges among these industries and/or new companies to connect businesses. This project will yield an industrial symbiosis "road map" identifying opportunities to increase the operating efficiencies of existing industries and opportunities for recruitment of new industry in Brownsville and the neighboring city of Matamoros, Mexico.

The project has been supported by U.S. Department of Commerce, EDA, Brownsville Economic Development Council, City of Brownsville, and the Port of Brownsville.⁷⁵

Eco-development is the application of industrial ecology principles to non-industrial establishments or businesses. An example of eco-development is the Riverside Eco-Industrial

⁷⁴ From President's Council on Sustainable Development, *The Road to Sustainable Development: A Snapshot of Activities in the United States*, March 1997.

⁷⁵ Smart Growth Network, "Smart Growth Network Case Study: Brownsville Eco-Industrial Park," [http://www.smartgrowth.org/casestudies/ecoin_brownsville.html], December 5, 1998.

Park in Burlington, Vermont. The project has been supported by EPA, Community Development Block Grant, Burlington Electric Department, the Department of Public Works, and Cornell University among others. The proposed project is an agricultural-industrial park in an urban setting, which will accomplish the following:

- ◆ Utilize readily available resources, such as wood chips to generate electricity by using bio-mass technologies.
- ◆ Support the greenhouse production of fish and horticultural products through the use of waste heat generated by the power plant.
- ◆ Purify water by using bio-based living organisms to digest liquid organic wastes (common in the food processing industry), and create high strength fertilizer; and,
- ◆ Replenish local soils by recycling and composting the area's waste foodstuff to increase agricultural production, and support value-added organic food industries.⁷⁶

The expected positive impacts of the project include reduction of waste heat dissipation into air and water, improvement in soil conditions and water quality, and the creation of sustainable jobs in the local economy. An aggressive five-year plan has been developed for this demonstration project that is expected to be a model ("waste-to-energy-to-food-to-waste") for replication and the development of commercially viable spin-off industries in other communities.⁷⁷

⁷⁶ Ibid [4].

⁷⁷ Ibid [4]. Also refer, Industrial Economics Inc., *Applying Decision Support Tools For Eco-Industrial Park Planning: A Case Study in Burlington, Vermont*, March 1998.

5.8 Significance of Technology Led Economic Development in the Los Angeles Basin

Recent advances in Information Technology (IT) have contributed substantially to the increase in productivity and economic growth in the U.S. As Alan Greenspan, the Federal Reserve Board Chairman, noted in his testimony to the Congress in February 1999:

According to rough estimates, labor and capital productivity has risen significantly during the past five years. It seems likely that the synergies of advances in laser, fiber optic, satellite, and computer technologies with older technologies have enlarged the pool of opportunities to achieve a rate of return above the cost of capital.⁷⁸

The U.S. economy is currently powered by the advanced communications and information technology. According to *The Emerging Digital Economy*, a study conducted by the Department of Commerce and the Electronic Commerce Working Group, IT contributed nearly 34.6% to the real economic growth in 1996.⁷⁹ The declining prices in the IT industry also contributed to lowering the inflation rate in 1996 and 1997.⁸⁰ The report concludes that IT will contribute to the economic growth in four ways:

- i. Building out the internet;
- ii. Electronic commerce among businesses;

⁷⁸ Federal Reserve Board, "FRB: Humphrey-Hawkins Testimony - February 23, 1999," Testimony of Chairman Alan Greenspan, [<http://www.bog.frb.fed.us/boarddocs/hh/1999/february/testimony.htm>], February 24, 1999.

⁷⁹ U.S. Department of Commerce (Secretariat on Electronic Commerce), *Emerging Digital Economy*, 1998, p. 6 (Figure 5).

⁸⁰ *Ibid*, [46], p. 5.

- iii. Digital delivery of goods and services; and
- iv. Retail sale of tangible goods.

In spite of the rapid growth in IT and its contribution to the U.S. economy, its penetration is not uniform. According to a survey study released by the National Telecommunications and Information Administration (NTIA), in 1998, there is a persistent *digital divide* between the "haves" and the "have-nots." Between 1994 and 1997, there was a greater disparity in the penetration of IT in terms of computer ownership and on-line access:

There is a widening gap, for example, between those at upper and lower income levels. Additionally, even though all racial groups now own more computers than they did in 1994, Blacks and Hispanics now lag even further behind Whites in their levels of PC-ownership and on-line access.⁸¹

Further, the "least connected" population that has not been served by the IT advancement include:

- i. the rural poor;
- ii. rural and central City minorities;
- iii. young households; and
- iv. female headed households.

The advancements in IT have thus not fully benefited the distressed neighborhoods with low-income population. There is considerable scope for the use of technology in alleviating distressed neighborhoods. The EDA has taken a lead role in emphasizing the thrust of technology in community development programs to create economically

⁸¹ U.S. Department of Commerce (National Telecommunications and Information Administration), *Falling through the Net: New Data on the Digital Divide*, July 28, 1998.

sustainable communities that can compete in the emerging technology-based economy. As the Notice of Funding Availability for 1999 indicates, EDA is interested in funding projects that include:

The commercialization and deployment of technology; particularly information technology and telecommunications, and efforts that support technology transfer, application and deployment for community economic development.⁸²

The emphasis on advanced Information Technology as a component of community and economic development holds special promise for the distressed neighborhoods of the Los Angeles Basin for several reasons:

- ◆ First, the Basin already offers a platform of a cluster of technology-based companies, with a predominance of multimedia and entertainment industries. Various known as the Tech Coast or the Digital Coast, the companies in the region develop Internet based new media, software tools, database for various uses, applications for education, consumer entertainment, and e-commerce. According to a study conducted by Los Angeles Regional Technical Alliance, venture capital investing in Information Technology increased by 1,000 percent since 1993.⁸³

⁸² Department of Commerce (Economic Development Administration), "Economic Development Assistance Programs—Availability of Funds under Pub. L. 105-393," *Federal Register*, Volume 64, No. 36, February 24, 1999, p. 1.

⁸³ Los Angeles Regional Technical Alliance (1998), *Southern California Inc.: A Region Poised. A Study of Venture Capital Investors, Investments and Technology in Southern California*, [<http://www.larta.org/vcstudy.htm>].

- ◆ Second, as explained in another section, the Basin has a large manufacturing base and apparel industries where the use of advanced technology can add value and increase productivity. The Basin also has a substantial presence of biotechnology firms. Thus, a technology-based development can tap the resources already available for mitigating distress. For example, to promote economic growth and job opportunities for low-income residents, Rebuild LA established the Apparel Technology Resource Center at the Los Angeles Trade Technical College. The Center provides training in the state of the art computer aided design and production and a series of workshops to help companies modernize manufacturing.
- ◆ Third, initiatives in preparing the residents of the distressed areas of the Los Angeles Basin for technical careers can help them elevate economically in the light of the considerable opportunities in the Basin. The availability of an educated, highly skilled workforce is a prerequisite for a technology-based economy. Job training and employment programs focusing on welfare recipients and minorities can help in alleviating distress on the one hand, and the development of a workforce for the business community on the other.

5.9 Strategies of Technology-Based Economic Development

Economic development programs should focus on creating linkages between companies and the available resources to support their application of new technologies. There are at least three components of the strategy of technology based economic development:

- i. provision of infrastructure;
- ii. supporting entrepreneurship; and
- iii. developing trained/ skilled workforce.

Infrastructure provision for technology-based economic development includes "information highways, fiber optics, satellites and digital switches, R&D test beds, research parks, incubators and laboratories."⁸⁴ High bandwidth capability is also required for allowing high-speed transmission of voice, data, and video signals for multimedia firms, entertainment, and telecommuting. The installation of such infrastructure is, however, expensive. Also, supplying such infrastructure for these networks requires a partnership between the developer and a range of providers, including cable, telephone, and computer hardware and software companies.⁸⁵

Entrepreneurial support is required in terms of developing business plans, obtaining financing, identifying markets and obtaining specialized services. Distressed areas however often lack a network of people with the knowledge and skills needed to support entrepreneurs and technology based companies. State-assisted programs can fill in the gap by providing technical and financial assistance for entrepreneurs and small businesses in such areas.

Availability of a trained and skilled workforce is important for the sustainability of the industry. Job training programs, skills enhancement programs, technical preparation, and job networking/linking are all a part of the strategy for developing a skilled workforce. Empowering the residents of the distressed areas with such skills reduces the unemployment rate.

EDA supports projects that fulfill the above broad strategy of economic development. The projects include:

Infrastructure Provision	• "Smart" Buildings
Entrepreneurial Support	• Business/High-Tech Incubators • Technology Transfer Facilities
Skilled Workforce	• Distance Learning Centers

5.10 "Smart" Buildings

A "smart building" can be defined from either of two perspectives - (i) building systems and (ii) infrastructure or tenant services.⁸⁶ While these two perspectives differ in their terminology, their focus is the same—the use of building infrastructure to support the changing commercial business environment.

At the heart of the buildings systems definition of a "smart building" is the use of cost containment and savings for the developer that benefit all tenants. There is an integrated system of a building's heating, ventilation, and air conditioning (HVAC) system, energy management, telecommunication system, and security and safety systems.⁸⁷

In this definition of a smart building, the benefits include:

- (a) the ability to attract tenants and lease space through the provision of building amenities;
- (b) the ability of tenants to easily connect to and configure building systems; and
- (c) the ability to easily connect to high performance telecommunications infrastructure such as satellite communication and access to the Internet through the use of fiber optic cables which provide voice, data, and video support.

The results of these benefits include lower operating costs for building owners and tenants leading to increased building

⁸⁴ U.S. Department of Commerce (Economic Development Administration), *Science and Technology Strategic Planning: Creating Economic Opportunity*, State Science and Technology Institute, Columbus, OH, p. 26.

⁸⁵ Pamela Blais, "Getting Wired," *Urban Land*, December 1998, p. 60.

⁸⁶ Dean Schwanke, *Smart Buildings and Technology-Enhanced Real Estate, Volume 1*, Urban Land Institute, 1985.

⁸⁷ Donald A. Coggan, "Smart Buildings Simply Explained," [[Http://www.coggan.com/smartsimple.html](http://www.coggan.com/smartsimple.html)], January 9, 1999.

service revenue. The tenant services definition of smart buildings is focused on optional levels of service that can be accessed by one or more tenants in order to meet their need and budget for office automation and communication. This definition describes tenant options for services such as sensor-activated energy systems, high-tech security systems, and video, telecommunications, and computer services. Within this definition of a smart building, the benefits include:

- (a) the ability to easily move to more advanced levels of telecommunications as their need for these services grows; and
- (b) the ability to seamlessly move or access services of different telecommunications vendors.

The results of these benefits include a lower risk of expense for infrastructure changes and support for developers, as well as reducing costs for tenants through an infrastructure that is flexible to the information technology needs of existing businesses and compatible with a variety of training and support environments.

In both cases, an underlying linkage in smart buildings is in the use of technology within building infrastructure with respect to energy efficiency, programmed starts, stops and adaptive control. With respect to life-safety systems, closed-circuit television, card access control, intrusion alarms, emergency control of elevators, HVAC, and doors and smoke detectors characterize smart buildings. With respect to telecommunications, smart buildings are characterized by PBX telephone systems, cablevision, videotext, electronic mail, and access to the Internet.

As economic development tools, smart buildings, provide amenities to attract businesses to an area that can employ local residents. Moreover, by requiring additional services from the point of construction through on-going building maintenance, smart buildings can also act as indirect sources

of employment through construction, wiring, computer-related services, as well as food and beverage service.

5.11 Technology and Business Incubators

Start-up and fledgling companies often lack the resources to successfully finance, manage, and operate their companies, especially within the first two to three years of operation. Business incubators help to fill this gap by providing flexible space and leases, exposure to business and technical consultants, and contacts at financial institutions.⁸⁸ The mission of a business incubator is to “assist small business owners and operators in developing their business to the point where it is self-sustainable, and can operate on its own in the open market.”⁸⁹ They nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable. Incubators provide hands-on management assistance, access to financing and orchestrated exposure to critical business or technical support services. They also offer entrepreneurial firms shared office services, access to equipment, flexible leases and expandable space. An incubation program’s main goal is to produce successful graduates, businesses that are financially viable and freestanding when they leave the incubator, usually in two to three years.⁹⁰

As a relatively new concept in economic development business incubators in North America have grown from a total of 12 in 1980 to 587 in 1998.⁹¹ As a model of

⁸⁸ David B. Bowes, *Creating Globally Competitive Community*, Partners for Livable Communities, Washington, D.C., 1997, p. 37.

⁸⁹ County of Los Angeles (Community Development Commission), “IN-NET,” [http://www.lacdc.org/ECON/innet.htm].

⁹⁰ National Business Incubation Association, “What is business incubation?” [http://www.nbia.org/whatis.htm].

⁹¹ NBIA, “Business Incubators Thriving, Especially the ‘Joiners,’” [http://www.nbia.org/press/thrive.htm].

sustainable economic development and efficient operation, business incubators provide several economic benefits including job creation, increases in the local tax base, and economic diversification.⁹² The success rate for companies that graduate from incubators is 87%, compared to 20% for other start-ups. Once they outgrow their incubator space, 84% of graduates stay in the surrounding community.⁹³

Incubators are effective for technology, light manufacturing, services and mixed use. They are sponsored by government and non-profit organizations (51%), colleges and universities (27%), hybrid organizations and public-private partnerships (16%), investment groups and real estate development partnerships (8%), and other organizations (5%).⁹⁴ Over 10 incubators already exist in the Los Angeles Basin in various fields, e.g. high technology, software, entertainment, and so on.

5.12 Technology Transfer Facilities

Technology transfer is the process in which a product or service moves from conceptualization stage to commercial stage. It includes activities like market testing, patents and licensing. It encompasses establishment and financing of new companies, and the adoption of existing or new technologies by existing companies, particularly manufacturers. Technology transfer facilities provide technical and business development assistance in translating and incorporating research and development technologies; they also provide access to technology experts through an organizational network.

⁹² So, C., "First Look: An Introduction to the Services of Microenterprise Development," quoted in Gwen Shuyler, "Business Incubators: A Review," in *Center for Entrepreneurial Leadership Clearinghouse on Entrepreneurship Education Digest*, Number 97-4, p. 1.

⁹³ Karen Kaplan, "Another Incubator is About to Hatch," *The Los Angeles Times*, Business Section, October 12, 1998.

⁹⁴ *Ibid* [57].

Technology transfer is a critical element in the strategies to attract and retain businesses and to help them expand and take on new product or service lines. The transfer of technology serves two basic purposes:

- i. to place products and processes in the marketplace through newly created spin-off companies or existing companies; and
- ii. to bring new or underused technologies to existing companies, particularly manufacturers, to make them more competitive and enable them to take on new product lines.⁹⁵

Business incubators, along with innovation centers and government agencies currently act as facilities for technology transfer. By providing start-up and fledgling companies with technical assistance, business expertise, and information exchange, business incubators and innovation centers provide the essential principles of technology transfer to their clients. An example is the NASA Commercialization Center in Pomona, California. As a high-technology incubator, businesses within the Center are "teamed with Jet Propulsion Laboratory and/or Dryden Flight Research Center personnel to solve engineering problems and serve as a special resource for new companies whose key products or services are based on licenses of technologies developed at JPL or Dryden."⁹⁶

At the heart of technology transfer is the development of partnerships. Within Southern California, technology transfer centers such as the Engineering Technology Transfer Center at the University of Southern California promote

⁹⁵ Jeffrey A. Finkle, *Commercializing Technology: Linking Research to the Marketplace*, National Council for Urban Economic Development (CUED), December 1989.

⁹⁶ California Institute of Technology (Jet Propulsion Laboratory, Media Relations Office), "NASA selects Cal Poly Pomona as Business Incubator", [<http://www.jpl.nasa.gov/releases/98/incubate.html>], July 10 1998.

partnerships between different organizations. Partnerships within this center include those with “the Los Angeles Regional Technology Alliance (LARTA) Corporation which supports and promotes development in many high-growth industries including information technologies, telecommunications and multimedia, Clean Energy Systems and Environmental Technologies.”⁹⁷ Other technology transfer centers such as the Centers for Applied Competitive Technologies focus on small manufacturers to assist in modernizing management and production techniques.

- ◆ There are several federal and state programs, and local level agencies in the Los Angeles Basin that assist in technology transfer. A few examples include:
- ◆ The Manufacturing Extension Partnership (MEP), which is a “nationwide network of more than 70 not-for-profit Centers whose sole purpose is to provide small and medium-sized manufacturers with the help they need to succeed.”⁹⁸ The Centers, located in all 50 states and Puerto Rico, are linked together through the Department of Commerce’s National Institute of Standards and Technology (NIST). That makes it possible for even the smallest firms to have access to more than 2,000 knowledgeable manufacturing and business specialists.
- ◆ The California Technology Investment Partnership (CalTIP), a state matching grant program, in which technology companies can receive up to \$250,000 to help bring their products to the market.
- ◆ The Goldstrike Partnership, a program of the California Trade and Commerce Agency's Office of Strategic Technology (OST). OST supports the development,

⁹⁷ Ken Dozier, “Examining the benefits of the USCETTC,” [http://www.usc.edu/dept/engineering/TTC/NASA/newsletter.html], 1998.

⁹⁸ U.S. Department of Commerce (National Institute of Standards and Technology, Manufacturing Extension Partnership), “MEP Definition, What is MEP?” [http://www.mep.nist.gov/whatis1/index.html].

application, and commercialization of technology to create jobs, respond to industry changes, and foster competitiveness.⁹⁹ The Office also administers programs that provide cash matches to leverage private and federal dollars for technology development and commercialization, particularly in response to defense industry conversion. The Regional Technology Alliances also work with OST through the Goldstrike program.

- ◆ TeamCalifornia, which is a network of public and private-sector economic development leaders that brings together resources and expertise from various organizations throughout California to promote business investment and job creation.¹⁰⁰ TeamCalifornia members are comprised of experts from economic development corporations, businesses, utilities, community colleges and government agencies to help improve California’s competitiveness and enhancing local and statewide economies through information sharing, communications, and increased assistance.
- ◆ The Global Technology Partners™, which assists technology companies in accessing potential partners, investors, and mentors to assist in identifying global markets.
- ◆ PRISSM, a manufacturing assessment and implementation service in which a team of manufacturing experts assesses and provides implementation support on business and operational practices;
- ◆ The Southern California Venture Forum, which provides assistance for technology companies in finding funding sources.

⁹⁹ California Goldstrike Partnership, “Goldstrike Partnership Main Page,” [http://www.goldstrike.net].

¹⁰⁰ California Trade and Commerce Agency, “TeamCalifornia,” [http://commerce.ca.gov/business/select/communities/teamca.html].

5.13 Distance Learning Centers

Distance learning is “the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance.”¹⁰¹ It offers many options for education training, and instruction.

There are two types of distance learning. The first is synchronous instruction or “real time” instruction.¹⁰² It provides a means for simultaneous interaction and participation and allows participants to learn from a location that is spatially separated from the instructor or facilitator. Due to interaction, it does not allow learners to choose their instructional time frame. Examples of synchronous instruction include interactive television, teleconferencing, and Internet relay chats (IRC). The second type of distance learning is the asynchronous instruction. This form of distance learning allows learners to choose their own instructional time frame and location, but lacks the interactive nature of synchronous instruction. Examples of asynchronous distance learning include e-mail, listservs, audiocassette courses, videotaped courses, correspondence courses, and Internet World Wide Web courses.

Distance learning can help to promote local economic development by adding value to human resources within the community through instruction. Many adults may be unable or unwilling to attend traditional adult education schools and classrooms due to various reasons (e.g. single parent families who work and need child care; dual income families backing split shifts; the dearth of public transportation systems; public safety issues; etc.). Distance learning offers an alternative for

those who are motivated to learn or develop skills, but are limited by these circumstances.

5.14 Collaborative Regional Planning

EDA supports projects that demonstrate locally created partnerships focusing on regional solutions. It encourages projects that deal with issues that transcend jurisdictional and other boundaries. According to the EDA, “projects that evidence collaboration in fostering an increase in regional (multi-county and/or multi-state) productivity growth will be considered to the extent that such projects demonstrate a substantial benefit to economically distressed areas of the region.”¹⁰³

Organizational partnerships are becoming an imperative for community based organizations and civic groups as they try to increase their effectiveness in the face of reduced budgets, downsizing, and devolution. The limited resources of EDA combined with rapid social, economic, and technological innovation, demands that organizations like successful entrepreneurs, be adept in adapting to the changing circumstances.

Partnerships created as a result of collaboration between two or more groups working towards a common goal or objectives offer a practical, outcome-oriented way to create and maintain collaborative networks. These creative collaborative approaches provide ways and means to leverage resources, build social capital, diversify funding, and sustain regional development efforts.¹⁰⁴

¹⁰¹ United States Distance Learning Association (USDLA), "USDLA Definition," [http://www.usdla.org/Pages/define.html].

¹⁰² Dennis Porter and Carla Lane, “Measuring Instructional Value Added In Distance Learning: A Working Paper,” California Distance Learning Project, [http://www.otan.dni.us/cdlp/cdlp2/valueadded.html].

¹⁰³ U.S. Department of Commerce (Economic Development Administration), “Economic Development Assistance Programs - Availability of Funds under Pub. L. 105-393,” *Federal Register*, Volume 64, No. 36, February 24, 1999, p. 1.

¹⁰⁴ National Association of Development Organizations, *The Power of Partnerships, A Guide for Practitioners and Policymakers – Experiences*

To advance the common objectives of economic development, the need for cooperation among local jurisdictions, community development corporations, and counties is paramount. Examples of such regional cooperation include:

- i. the Kennebec Regional Business Park, Oakland, Maine; and
- ii. Inland Water Transport Terminal with Foreign Trade Zone, Quincy, Illinois.¹⁰⁵

Kennebec Regional Business Park, Oakland, Maine

Instead of competition among individual communities, the Central Maine area decided to seriously consider the advantages and value of regional cooperation. Organizations involved in this effort included members of Augusta Area and Waterville Area Chambers of Commerce and the Kennebec Valley Council of Governments.

Thirty-two municipalities agreed to the concept of developing the Kennebec Regional Business “super” park. This campus-styled 330-acre business park is proposed to be complete with design and lay-out standards, utilities installed sub-surface, with bermed and terraced parking lots, and screened refuse containers.

EDA planning funds in addition to State Community Development Block Grant funds enhanced efforts to secure funding for the park. Each of the 32 municipalities has raised pre-development funding to operate the regional effort through June 1999 and has approved the concept of becoming members of the Kennebec Regional Development Authority, an agency that was authorized by Maine legislature in Spring 1998. Provided that these municipalities

and lessons drawn from collaboration between governmental and non-governmental organizations, Washington, D.C., April 1998, p. 3-4.

¹⁰⁵ National Association of Regional Councils, *State of the Art Practices in Economic Development for the 21st Century*, January 1999.

become members of the Kennebec Regional Development Authority, by July 1, 1999, the agency will be authorized to issue tax exempt bonds to finance the construction of the business park in 5 phases. It is expected that the project will create, upon build-out 2,500 to 4,500 highly skilled and high paying jobs.¹⁰⁶

Inland Water Transport Terminal with Foreign Trade Zone, Quincy, Illinois

The proposed project conceived by the Two Rivers Regional Council in Quincy, Illinois is an Inland Water Transport Terminal with a Foreign Trade Zone designed to accelerate the area’s economic growth. The feasibility study for this project was funded by EDA. The project has grown into a tri-state (Illinois, Iowa, and Missouri) regional effort to develop a port authority that will seek to be a leading international and domestic distribution gateway. The Mississippi River and the Illinois River are the defining features of the area and major transportation arteries (barge routes) with potential for inland navigation, foreign trade, tourism, and recreation. Inland water transportation is undergoing a renaissance. Transportation by barge is significantly cheaper than by either truck (10 times) or rail (4 times).

Support for the project is from all three state governments, participating counties, economic development districts, foreign trade zone and the private sector. The potential for job creation is tremendous. Now the Two Rivers Regional Council is making efforts to pass legislation to establish a regional port authority that would allow it to option land, buy sites, and enter into private-entity agreements for the creation of specific facilities. The implementation of this project will reshape the economy of

¹⁰⁶ Ibid [72], p68.

the region, and prepare it for the challenges of the 21st century.¹⁰⁷

With 178 separate incorporated cities (33 of which have a population of over 100,000), the Los Angeles Basin presents a great opportunity for regional collaboration and partnerships that promote economic development. The extent and success of sustainable development, re-industrialization and information technology strategies are therefore dependent on the degree of collaboration and partnerships among organizations, and the resources such partnerships can leverage from the public and the private sector.

¹⁰⁷ Ibid [72], p71.

APPENDIX A-1. HOURLY EARNINGS (1) FOR SELECTED OCCUPATIONS, ALL WORKERS (2) , ALL INDUSTRIES, LOS ANGELES BASIN, JAN. 1997

Occupation(3)	All Industries Percentiles					
	Mean	10	25	50	75	90
All occupations	\$16.44	\$5.86	\$8.28	\$13.00	\$21.00	\$30.29
White-collar occupations	\$20.49	\$8.50	\$11.56	\$16.57	\$25.63	\$36.25
Professional specialty and technical occupations	\$26.34	\$13.64	\$18.68	\$24.26	\$31.88	\$41.92
Professional specialty occupations	\$28.35	\$16.41	\$20.74	\$26.25	\$34.13	\$43.50
Technical occupations	\$18.40	\$11.30	\$13.27	\$16.67	\$20.91	\$25.91
Executive, administrative, and managerial occupations	\$29.92	\$15.63	\$18.58	\$25.64	\$35.00	\$45.67
Executives, administrators, and managers	\$34.57	\$16.25	\$22.12	\$30.07	\$40.07	\$50.52
Management related occupations	\$22.56	\$14.90	\$17.12	\$20.20	\$25.84	\$30.82
Sales occupations	\$15.18	\$6.00	\$7.50	\$11.80	\$16.40	\$25.57
Administrative support occupations, including clerical	\$12.30	\$7.80	\$9.58	\$11.94	\$14.42	\$17.55
Blue-collar occupations	\$12.13	\$5.43	\$7.01	\$10.05	\$16.37	\$21.55
Precision production, craft, and repair occupations	\$17.77	\$8.34	\$12.60	\$18.63	\$21.56	\$25.21
Machine operators, assemblers, and inspectors	\$9.14	\$5.00	\$6.00	\$8.05	\$11.00	\$14.76
Transportation and material moving occupations	\$11.29	\$6.50	\$8.00	\$10.34	\$13.92	\$17.35
Handlers, equipment cleaners, helpers, and laborers	\$8.78	\$5.00	\$6.00	\$7.89	\$10.25	\$14.32
Service occupations	\$9.75	\$4.75	\$5.50	\$7.27	\$10.84	\$19.76
Food service occupations	\$7.01	\$4.75	\$5.00	\$5.95	\$8.50	\$10.94
Health service occupations	\$8.44	\$5.85	\$6.50	\$8.17	\$9.64	\$11.74
Cleaning and building service occupations	\$7.35	\$4.75	\$5.15	\$6.80	\$8.48	\$11.25
Personal service occupations	\$9.46	\$5.00	\$5.50	\$7.82	\$10.63	\$14.54

Source: From U.S. Department of Labor, Bureau of Labor Statistics, New survey provides data on wages in the Los Angeles-Anaheim-Riverside Area, January 21, 1998.

Notes:

(1) Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

(2) All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

(1) A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

Appendix A-2. Mean hourly earnings (1) by occupational group and selected characteristic, all industries, Los Angeles Basin, January 1997

Occupational group (2)	Full-time workers (3)	Part-time workers (3)	Union (4)	Non-union (4)	Time (5)
All occupations	\$17.29	\$9.51	\$17.21	\$16.16	\$16.36
White-collar occupations	\$21.37	\$12.25	\$20.79	\$20.40	\$20.33
Professional specialty and technical occupations	\$26.72	\$21.53	\$27.95	\$25.60	\$26.34
Professional specialty occupations	\$28.74	\$23.49	\$29.13	\$27.92	\$28.35
Technical occupations	\$18.77	-	\$17.65	\$18.54	\$18.40
Executive, administrative, and managerial occupations	\$29.86	-	\$23.34	\$30.56	\$29.64
Sales occupations	\$17.33	\$7.93	\$12.34	\$15.56	\$12.72
Administrative support including clerical occupations	\$12.69	\$9.48	\$13.71	\$11.89	\$12.30
Blue-collar occupations	\$12.39	\$8.04	\$15.78	\$10.61	\$12.17
Precision production, craft, and repair occupations	\$17.81	-	\$20.57	\$15.95	\$17.83
Machine operators, assemblers, and inspectors	\$9.17	-	-	\$8.47	\$9.21
Transportation and material moving occupations	\$11.65	\$9.33	\$13.33	\$9.98	\$11.25
Handlers, equipment cleaners, helpers, and laborers	\$8.98	\$7.57	\$10.88	\$8.01	\$8.79
Service occupations	\$10.78	\$6.22	-	\$7.77	\$9.76

Source: From U.S. Department of Labor, Bureau of Labor Statistics, New survey provides data on wages in the Los Angeles -Anaheim-Riverside Area, January 21, 1998.

Notes:

(1) Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

- (2) A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.
- (3) All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.
- (4) Union workers are those whose wages are determined through collective bargaining.
- (5) Time workers' wages are based solely on an hourly rate or salary

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS PILOT TEST, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

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