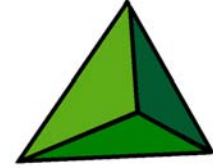




**ECONOMIC &  
WORKFORCE  
DEVELOPMENT**  
*through the*  
CALIFORNIA  
COMMUNITY  
COLLEGES

**BUSINESS AND WORKFORCE  
PERFORMANCE IMPROVEMENT INITIATIVE**



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**Strategic Possibilities Report  
Bay Region**

**Logistics and Distribution  
“Warehousing Career Ladder”  
At-a-Glance**

**Center of Excellence, EWD Region 4**

**City College of San Francisco**

**November 2006**



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# Strategic Possibility Summary for Bay Region Community Colleges

## Logistics and Distribution “Warehousing Career Ladder” November 2006



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*NEARLY 20,000 JOBS IN THE WAREHOUSING INDUSTRY WILL BE OPEN IN ALAMEDA AND CONTRA COSTA COUNTIES BETWEEN 2002 AND 2012, REPRESENTING A 24% INCREASE IN OPENINGS OVER THE PERIOD. THESE JOBS PAY AN AVERAGE OF \$18.73 PER HOUR AND HAVE A DEFINED CAREER LADDER.*

Source: CA Employment Development Department

## **Executive Summary**

According to the California Employment Development Department, in 2002 there were 82,150 jobs in the warehousing sector in Alameda and Contra Costa counties. By 2012, this number will grow to be nearly 102,000 jobs, a 24% increase representing 19,760 job openings (new and net replacements) over the ten year period. The warehousing sector of the logistics industry will continue to offer strong employment opportunities to Bay Area workers for years to come due to the growth of international trade through the Port of Oakland and because increases in the Bay Area's population will require growing wholesale and retail sectors. It is also a sector that cannot easily leave the region due to the need for warehousing operations to be near the Port of Oakland and the distribution channels north to Sacramento and south to the Central Valley.

Warehousing is a segment of the logistics and distribution industry that offers blue collar workers with marginal education the opportunity to start work at reasonably good pay and move up a variety of skill ladders to much higher incomes. The average starting pay for workers with no training is \$8.56 per hour. However, the average pay for a trained worker doing manual tasks is \$13.74 an hour (*entry level: manual work*). This puts workers on the first rung of a four level skill ladder. With on-the-job and skills training, workers can advance into positions that successively average: \$16.05 an hour (*mid-level: equipment operation & tending*), \$18.48 an hour (*advanced level: equipment maintenance & repair*) and \$26.63 an hour (*front line supervisor*).

The warehousing sector offers community colleges an opportunity to make an important contribution to the regional economy. Colleges can assist some of the 38% of the Bay Area workforce who have never taken a college class to get the training needed to advance at work and move towards greater economic self-sufficiency. Many students entering this sector or those receiving training to move up a warehousing career ladder will have families, relatively low incomes, no college experience and an interest in a quick return on their education investment. Courses will thus have to be shorter than traditional semester long classes, offered at flexible hours to meet business needs and probably located off-campus to provide hands-on training in actual warehouse environments. That said, in overcoming these challenges, the community colleges will be fulfilling an important part of their mission.

Community colleges have an opportunity to play an important role in the logistics and distribution industry in the Bay Region. The development of a close working relationship with local warehousing firms and demonstrating that community colleges can provide skilled workers that meet industry standards will be an important first step. Employers interviewed for this report (see page 15) indicate that they are finding a need for several types of training. Entry-level workers need basic skills, soft skills training and often English as Second Language classes. These workers and their more

advanced colleagues will need increasingly higher levels of basic education plus training in more and more complex technology, machines and equipment. First line supervisors will need to learn how to make the move from hands-on work to supervising others and working within the context of corporate decision systems.

**Based on the data presented in this report, the community colleges in Alameda and Contra Costa Counties should organize a response to meet the needs of the local warehousing industry.** This report outlines how strong projected job openings in the field, career ladder opportunities for entry-level workers, relevance to the community college role, and the opportunity to build upon the positive economic impact of warehousing on the region's economy all fit together to form a picture of an industry that community colleges should be serving. It is recommended that college responses to the warehousing industry include partnerships with industry associations, key employers and Workforce Investment Boards.

## **What is a Strategic Possibility?**

The California Community Colleges System has charged the Economic & Workforce Development (EWD) Network to strategically identify growing industries and occupations that have partnering potential for the college's programs. The EWD network aims to best serve our local communities by identifying industry sectors with empirically validated projected growth. Additional criteria to establish the value of a Strategic Possibility includes: relevance (to the community colleges), economic impact, the adaptability of colleges to respond, and the ability to build partnerships with workforce and industry leaders to create career paths and upward mobility.

A Strategic Possibility report identifies industries and occupations that meet some, but not all, of the aforementioned criteria. While a response may be appropriate for a specific college, a strategic response from multiple districts is not warranted. A Strategic Possibility that meets all of the stated criteria, thus warranting an organized response from regional community colleges, is then defined as a Strategic Opportunity. A full environmental scan may then be conducted to evaluate and suggest possible actions to ensure market responsiveness.

## **Overview of the Strategic Possibility**

**Description.** The warehousing industry was selected as a strategic possibility for Bay Region community colleges based on two recent reports focusing on the logistics and warehousing industry. The first is a report issued by the California Regional Economies Project in 2005 entitled: "Logistics and Manufacturing Value Chains: Meeting the Workforce and Infrastructure Demands of a 'Real Time' Economy." This report clearly identifies the Logistics industry and sub-sectors of the industry, such as warehousing and storage, as vital to the growth of the Bay Area economy and the California economy. The second, a report by Dr. John Husing, commissioned by the Los Angeles County Center of Excellence at Mt. San Antonio College, focuses on the career ladder opportunities in the Los Angeles warehousing industry. This report served as the framework for investigating the possibility of a similar warehousing career ladder in the Bay Area as the one identified for the Los Angeles area.

The growth of international trade through the Port of Oakland plus the population-serving retail sectors of the Bay Area's economy are creating thousands of jobs in the warehousing industry. This job creation and the need to replace workers who leave positions will continue to occur in Alameda and Contra Costa Counties for the foreseeable future. Alameda County is home to the Port of Oakland, handling 99% of the containerized cargo passing through Northern California. In 2003, shipments between Oakland and its six leading trading partners were valued at approximately \$31 billion, and the number of containers processed in 2005 through the Port of Oakland increased by 11.1 % over 2004.<sup>1</sup> The projected population growth in Alameda and Contra Costa Counties through 2030 of almost 1.5 million people will also lead to increased local economic activity and job opportunities.<sup>2</sup>

In the sector's production function, goods are directly received, unloaded, stored, picked, assembled, loaded and shipped. Completely untrained workers can enter this field at incomes above the \$6.75 per hour minimum wage. For example, the average starting pay for packers and packagers is \$8.56 per hour. However with training a worker doing manual tasks averages \$13.74 per hour. This puts workers on the first rung of a four level skill ladder that enables them to advance if on-the-job learning and job skill training is provided. Most firms pay benefits to their workers.

The four skill ladder rungs through which workers can move are made up of a variety of jobs for which the skill knowledge can be grouped, allowing the development of a vertical training program by the community colleges. By completing certificate programs (see page 10) at each of these levels, workers can increase their understanding of the workforce culture, advance their basic educational knowledge and enhance their job skills. This training will qualify employees for higher pay levels and increased job opportunities. For example, a warehouse worker at the mid-level of the career ladder who performs equipment operation & tending can average \$16.05 an hour. A worker at the advanced level who does equipment maintenance & repair can average \$18.48 an hour and a worker who advances to the top of the warehousing career ladder as a front line supervisor can make an average of \$26.63 an hour.

**Demand.** The rising demand for trained warehouse workers is in large part due to the increasing number of containers moving through the Port of Oakland (see Appendix B.) During the past three years (2003-2005) the number of TEUs (twenty foot equivalent units) processed through the Port of Oakland grew at an average rate of 10% per year. **At a projected growth rate of 10% per year, the Port will handle 3.66 million TEUs by 2010 and approximately 9.5 million TEUs by 2020.**

Based on the increasing container shipments through the Port of Oakland, adjacent areas of the Central Valley (Stockton, Tracy, Lathrop) are rapidly developing as commercial warehousing and distribution centers to add to the existing capacity in Alameda and Contra Costa counties. One example of the future expansion planned for the Port and the region is the development of a dedicated container-rail shuttle between Oakland and the Central Valley, where inbound containers with contents for distribution throughout California can be more efficiently matched with outbound containers required for agricultural and other commodities. Development of this rail link may also

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<sup>1</sup> Vision 2000 Maritime Development Program, Port of Oakland, [www.portofoakland.com](http://www.portofoakland.com)

<sup>2</sup> ABAG Projections 2005, Association of Bay Area Governments, [www.abag.ca.gov](http://www.abag.ca.gov)

make Oakland a more competitive West Coast destination for ships carrying goods for Southern California markets.<sup>3</sup> In addition, nearly 60% of trade passing through Oakland is with Asia – which will continue to be a growing market in the future. For example, container traffic from Asia to the U.S. increased by 14% in 2004. According to the Goods Movement Action Plan prepared by the California Business, Transportation and Housing Agency and Cal EPA, “...shipments of containers are poised to double over the next 15 years and perhaps triple over the next 20 years.” The Bay Area warehousing industry must expand to process a significant share of these goods.

Coupled with increased international trade through the Port of Oakland is projected population growth in the same counties - Contra Costa and Alameda - where these warehousing jobs will be available. As population growth occurs, the warehousing industry experiences growth in order to store and ultimately ship the goods to retail outlets that will serve the increasing number of people. The population growth projected for the three fastest growing counties in the northern Bay Region - Contra Costa, Alameda and Solano - is a combined 1.46 million people by 2030 (see Appendix B).

**Labor Market Projections.** According to the California Employment Development Department, in 2002 there were 82,150 jobs in the warehousing sector in Alameda and Contra Costa counties. By 2012, this number will grow to be nearly 102,000 jobs, a 24% increase over the ten year period. This projection includes 51,460 entry level positions that average \$13.74 per hour, 10,220 mid-level positions that average \$16.05, 22,450 advanced positions that average \$18.48 and 17,780 employees working in front-line supervisory jobs that average \$26.63.

**Value to Colleges.** Discussions with employers (see page 15) in the warehousing and logistics industry indicate that the speed of growth in this sector and the continuous adoption of information technology are changing their industry so fast that they have a significant need for trained workers. There is clearly a strategic opportunity for the community colleges to play a major role in training workers who could enter this expanding sector.

## **Validation of the Strategic Possibility**

In researching this strategic opportunity, discussions were held with human resource professionals involved in the management of major warehousing operations at Safeway, Inc. a large grocery chain based in Pleasanton, California; Give Something Back, an innovative office supplies company based in Oakland, California and GMG Distributors, a hardware and painting supplies company in San Leandro, California. These managers described the workforce development issues they face and discussed their business needs related to retaining, training and promoting a skilled workforce.

California Employment Development Department Labor Market Information Division (LMID) data was used to validate the projected job growth for the warehousing sector in Alameda and Contra Costa Counties through 2012. LMID data indicates that across the four levels of the warehousing career ladder, these two East Bay counties showed the greatest overall job growth in the industry among the nine counties in the Bay Area.

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<sup>3</sup> International Trade and The Bay Area Economy: Regional Interests and Global Outlook 2005-2006, Bay Area Economic Forum, July 2005

Extensive research was conducted on the Port of Oakland and the projected growth of international trade through the Port as one of the key economic drivers of the Bay Area's warehousing and goods movement sector. Several reports by the Port of Oakland about their operations and future development plans were used to validate the growth in the warehousing industry. In addition, reports from the Bay Area Economic Forum, the Metropolitan Transportation Commission, the Association of Bay Area Governments and the California Regional Economies Project were utilized to validate this strategic possibility.

Finally, a report on the warehousing sector by the Los Angeles County Center of Excellence at Mt. San Antonio College was used as background information for this report.

## Qualifying the Strategic Possibility

The Business and Workforce Performance Improvement Center of Excellence has identified six criteria that determine if an industry qualifies for a strategic response from local community colleges. They are summarized in the chart below and will be discussed in the narrative that follows.

Criteria	Description
Size	Data that substantiates the size of the possibility and whether it warrants an organized college response
Relevance	How the possibility and the job requirements fit with a college's niche and what a college can best respond to.
Adaptive	What will need to take place in order for colleges to quickly/best respond to this need (i.e. equipment, additional instructors, shift of resources, collaborations)
Economic Impact	How economically critical the industry is or will be. Would the region be substantially impacted by the industry growing, changing, or leaving?
High Growth	Current and projected job growth in the region and California along with significant changes in the industry that have implications for workforce training.
Leveraging	Industry and workforce partners, including other EWD Initiatives, that might combine resources toward this effort.

### Size

The size of the strategic possibility and whether it warrants an organized college response is linked to a career pathways approach to the workforce needs of the industry. Workers in the warehousing sector have an opportunity to get the training needed to qualify for jobs along a four step skill ladder. Training for these warehousing jobs can be delivered to prospective and incumbent workers by community colleges through a series of certificate programs. Some of the occupations may appear more geared to manufacturing than warehousing. However, employer interviews indicate that more assembly and quality control is going on inside warehouses today than in the past.

Workers in entry-level positions (manual work) who receive training have an opportunity to start moving up the warehousing skill ladder and earn higher pay.

It is assumed that entry level workers would go to work upon receiving their certification. For that reason, the mid-level positions (machine operators and tenders) of the warehousing skill ladder would be oriented to two other groups. The first would be workers already in warehousing jobs who feel they can move into more advanced positions with more skill training. The second would be students not in the industry who are assessed beyond the elementary level. With training and certification, they could enter the field in more complex jobs. Workers at this mid-level would be given the ability to operate and care for a wide variety of equipment and can earn higher pay than entry level workers who are essentially performing manual work.

Workers at the advanced-level positions (equipment maintenance and repair) who learn to install, repair and calibrate the machines and equipment needed to keep a warehousing facility operating can achieve significant pay levels. They can acquire the required knowledge for these tasks either through on-the-job learning or a certificate program.

Workers without college degrees who can achieve the highest pay scales in the floor operations of warehousing facilities are those who rise to become front-line supervisors (supervision and management of laborers an operations) They can acquire the knowledge necessary to perform these functions through on-the-job learning or a certificate program. To be supervisors they also need managerial training.

The chart below summarizes the projected job openings at each skill level of the warehousing career ladder:

<b>Warehousing Industry Career Pathway – Four Skill Levels Alameda &amp; Contra Costa Counties, 2002-2012</b>							
Level	Occupational Description	Education & Training Level	2002 Jobs	2012 Jobs (New & Net Replacements)	Numerical Change in Job Openings	Percent Change in Job Openings	Median Hourly Wage
1. Entry-Level	Manual Work	Short-Term On-the-Job Training	41,990	51,460	9,470	22.6%	\$13.74
2. Mid-Level	Equipment Operation & Tending	Moderate-Term On-the-Job Training	8,020	10,220	2,200	27%	\$16.05
3. Advanced - Level	Equipment Maintenance & Repair	Long-Term On-the-Job Training	18,070	22,450	4,380	24%	\$18.48
4. Front-Line Supervisors	Supervision & Management of Laborers & Operations	Work Experience	14,070	17,780	3,710	26%	\$26.63
	<b><u>TOTALS</u></b>		82,150	101,910	19,760	24%	\$18.73

Source: CA Employment Development Department

A complete listing of the positions and the job growth projections for the four skill levels of the warehousing career pathway are displayed in Appendix C.

**Based on the data presented above, the warehousing industry and the career ladder opportunity for entry-level workers to advance to a front-line supervisor position clearly warrants an organized community college response.**

## Relevance

California Community Colleges have a two-fold strategic opportunity: 1) to train and place students into entry-level warehousing jobs and 2) to add value for workers already in the warehousing industry by helping them acquire the skills and background necessary to advance up a warehousing career ladder. Reaching the ranks of front-line supervisor is the highest level that workers can attain in this career ladder without a four year college degree. Bay Area community colleges in Alameda and Contra Costa Counties (Peralta Community College District (CCD), Chabot-Las Positas CCD and Contra Costa CCD) in particular may be interested in responding to the opportunity documented in this report. These colleges can respond to local warehousing businesses by creating industry skills certificates to prepare workers for the warehousing career ladder. Workers could receive certificates at four levels:

- **Basic Warehousing Certificate.** After assessment, workers would complete courses in workforce culture and behavior, and specific entry-level job skills.
- **Intermediate Warehousing Certificate.** After assessment, workers would complete courses in basic knowledge, and in the tending and operation of basic warehousing equipment and machines.
- **Advanced Warehousing Certificate.** After assessment, workers would complete courses in basic knowledge, and in the installation, repair and calibration of basic warehousing equipment and machines. They would specialize in one of several classes of machines.
- **Warehousing Management Certificate.** After assessment, workers would complete courses in basic knowledge, and in management fundamentals, communication skills and basic information systems.

Colleges can also provide key services to facilitate this career ladder process:

- Assessments that determine students' educational foundation and skill levels.
- Career counseling that directs students to appropriate courses and certificate programs.
- Development of a career plan for students that outlines a continuous loop of training and job placement to help students advance up the career ladder.
- Job placement services that are connected to job openings from local employers (note: the same employers who colleges engage in assisting with the development of the warehousing certificate programs will likely be eager to hire the students who graduate from these programs.)

## Adaptive

Potential job seekers for entry-level warehousing jobs may not have graduated from high school or may not have attended classes for some time and are likely to feel uncomfortable in a traditional college setting. For that reason, the training should be held in workplaces (i.e. warehouses) or in off-campus vocational training centers.

Many students will seek quick returns on their education investment because they have families and cannot afford to be in training without working. Training should be delivered in short courses that are only as long as needed to achieve the desired

knowledge. This is why a certificate approach is the recommended format for the training. This may require adapting existing college classes to this unique audience. Courses will likely need to be held at times like weekends and evenings that meet the scheduling needs of workers and businesses, given that many students will be adults with families and most will have existing jobs.

Colleges have an opportunity to deliver classes to job seekers or incumbent workers via a contract education training approach or short-term non-credit classes that could be supported by employers who have an interest in hiring or promoting these newly trained individuals. WIA training funds also could be tapped for such classes. Similarly, this approach will also meet employers' needs to conduct employee training programs in a flexible manner that doesn't impinge on daily operations. In interviews for this report, employers expressed a need for short-term, hands-on, customized training as the most effective way to train current and prospective employees.

As workers move up the skill ladder, these challenges to the education system may become less pronounced. For example, advanced level classes in installing, repairing and calibrating equipment will likely be part of existing college programs. The supervisory level classes are most likely to use traditional campus classrooms. Workers at this level should also be more comfortable in this type of environment.

## Economic Impact

The Port of Oakland is the fourth largest container port in the United States and the 20th largest in the world. The Port occupies 19 miles on the mainland shore of the San Francisco Bay, one of the finest natural harbors in the world. The Port's \$600 million *Vision 2000* program will expand and improve marine terminals and develop transportation infrastructures. Two new marine terminals will be developed as well as an intermodal rail facility. The harbor entrance is being widened and deepened to accommodate the new generation of container vessels arriving in Oakland.<sup>4</sup>

There is a "triple bottom line economic benefit" to making these investments in goods movement infrastructure:

- Economic benefits in terms of lower prices and higher productivity
- Equity benefits for employees who meet the growing demand for highly skilled workers who can move up the warehousing career ladder
- Environmental benefits from improved efficiency, and reduced waste and bottlenecks in supply chains based on investments in transportation and trade infrastructure.<sup>5</sup>

From Oakland, direct train routes are available through Arizona to the Midwest and South, or directly east through Salt Lake City to the Midwest and Northeast. The following chart captures the **steadily increasing economic impact of the Port of Oakland** from 1995 through 2010. In 2010 the channel deepening projects and other infrastructure improvements are scheduled to be completed.

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<sup>4</sup> City of Oakland Business Development Office, Oakland Metropolitan Chamber of Commerce

<sup>5</sup> Logistics and Manufacturing Value Chains: Meeting the Workforce and Infrastructure Demands of a "Real Time" Economy, California Regional Economies Project, Collaborative Economics, 2005

## Port of Oakland Economic Impact

	1995	2000	2003	2010 (planned)
<b>Direct Jobs</b>	8,800	9,600	11,700	14,100
<b>Indirect Jobs</b>	5,300	5,700	6,900	8,200
<b>Total Jobs</b>	14,100	15,300	18,600	22,300
<b>State, County &amp; Local Taxes (in millions)</b>	\$89	\$96	\$117	\$140
<b>Total Personal Income (in millions)</b>	\$702	\$753	\$900	\$1,057
<b>Total Business Revenue (in millions)</b>	\$1,269	\$1,465	\$2,110	\$2,787
<b>Containers</b>	848,800	1,265,400	1,438,600	1,915,300

Source: portfoakland.com, 2006

Based on the increasing container shipments through the Port of Oakland, the adjacent areas of Alameda and Contra Costa counties and more recently the Central Valley region (Stockton, Tracy, and Lathrop) are vibrant commercial warehousing and distribution centers. These warehousing and distribution hubs require skilled workers to move goods in the supply chain from producer to consumer. The goods movement industry is a major economic driver for the Bay Area and the projections are that it will continue to generate jobs, personal income, tax revenue, and business revenue far into the future.

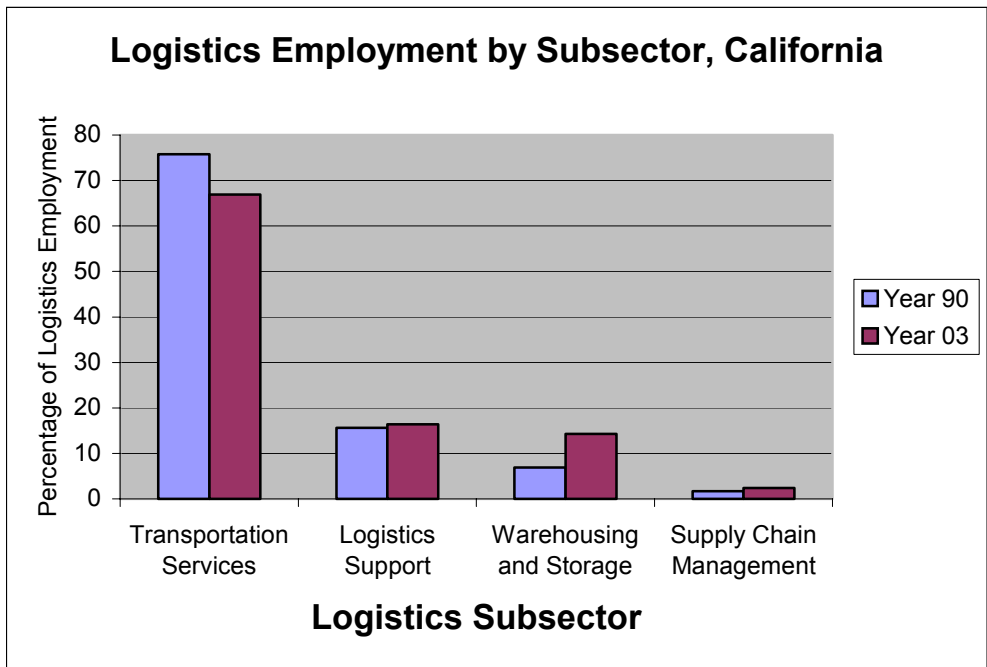
## High Growth

Materials moving and transportation occupations are growing rapidly in California. According to the California Employment Development Department **more than 300,000 employment opportunities (new jobs and separations) are projected in transportation and materials moving occupations through 2012 in California.**<sup>6</sup> More than 32,000 transportation and warehousing firms in California employ more than 421,000 employees, with an annual payroll that exceeds \$15 billion.<sup>7</sup>

The following chart shows that within Logistics employment in California, the Warehousing and Storage sub sector is an increasing share of all employment within the sector. Warehousing and storage employment in California doubled from 7% of all logistics employment in 1990 to more than 14% in 2003.

<sup>6</sup> California Employment Development Department. [www.calmis.ca.gov/FILE/OCCPROJ/cal\\$OccProj.xls](http://www.calmis.ca.gov/FILE/OCCPROJ/cal$OccProj.xls)

<sup>7</sup> U.S. Census Bureau. Statistics of U.S. Businesses: 2001: Transportation and Warehousing California.



Source: Bureau of Labor Statistics

Within manufacturing in the Bay Area, assembly workers have been losing jobs due to productivity gains as well as shifts in global demand. There is an opportunity for dislocated assembly workers to fill openings in the warehousing and logistics industry.<sup>8</sup> In addition, technology is changing the industry with the introduction of laser bar code readers, hand held inventory control computers, robotic conveyor systems, e-mail, geographic information systems (GIS) and other technologically advanced calibration and measuring devices. Workers who wish to work in this field and be successful will need to be trained on how to use these devices.

## Leveraging

A number of businesses, Workforce Investment Boards (WIBs) and regional community college Economic Development Centers were contacted for this report to determine their level of interest in partnering with local community colleges to prepare workers for the warehousing industry. There was clearly a high level of interest in this strategic possibility among both businesses, and workforce and economic development organizations. Based on this interest, City College of San Francisco initiated a partnership between regional businesses, the community colleges and several key workforce development organizations to apply for a grant from the California Community Colleges. The partnership – The Northern California Logistics and Distribution Initiative (NCLAD) - proposed to develop the curriculum and training programs needed to prepare incumbent workers to move up to higher skilled positions in the industry. The Industry Driven Regional Collaborative grant for \$600,000 over two years was funded in September of 2006.

Businesses in the NCLAD partnership who expressed an interest in training current employees or hiring newly trained individuals to fill openings are as follows:

<sup>8</sup> Logistics and Manufacturing Value Chains: Meeting the Workforce and Infrastructure Demands of a “Real Time” Economy, California Regional Economies Project, Collaborative Economics, 2005

<b>Business</b>	<b>Type of Firm</b>	<b>Location</b>
Safeway	Food/Grocery	Pleasanton & Tracy
Give Something Back	Office Supplies	Oakland
GMG Distributors	Hardware & Painting Supplies	San Leandro
Veritable Vegetable	Wholesale Foods	San Francisco
SaveMart	Food/Grocery	Tracy
Home Depot	Home Improvement & Building Supplies	Lathrop
Cor-o-Van	Business Logistics	San Francisco

Workforce Investment Boards and regional Community College Economic Development Centers in the NCLAD partnership who expressed an interest in partnering with local colleges to train new and incumbent workers to fill openings in the warehousing sector are as follows:

<b>WIB or Economic Development Partner</b>	<b>Possible Role</b>	<b>Location</b>
Oakland Private Industry Council	Advisory committee, recruitment & assessment of students, business contacts	Oakland
Alameda County Workforce Investment Board	Advisory committee, recruitment & assessment of students, business contacts	Alameda County
Workplace Learning Resource Centers	Partnership development, training needs assessments, curriculum development, training delivery	Bay Region & Silicon Valley
Centers of Excellence	Environmental scanning reports, partnership development, facilitation of partner meetings	Bay Region and Sacramento
Center for Advanced Competitive Technologies	Partnership development and curriculum development	Bay Region
Advanced Transportation Technology Centers	GIS training, curriculum development	Bay Region

## **Industry Training Needs & Challenges**

Warehousing and logistics employers in the Bay Area report that applicants and incumbent workers have a variety of skills needs. Human Resources managers interviewed for this report indicated problems with filling open positions and retention of workers. Key issues identified by managers were as follows:

- Many applicants for entry-level jobs in this sector have little or no work experience.
- Some workers lack fundamental workplace behavior, such as coming to work consistently, being punctual and working cooperatively in a team.
- Basic skills are often lacking, even among employees with solid workplace behavior skills, such as communicating effectively – written and oral –, reading, following directions, prioritizing work, basic math, and computer skills.
- Supervisory training for warehouse workers who are experienced but not qualified yet to promote into a front-line supervisor position.

Basic skills as outlined above are required in entry-level warehouse positions because in addition to the manual work of lifting and packing products into boxes and containers, workers need to be able to work in teams and use the following equipment/devices: laser bar code readers, hand held inventory control computers, robotic conveyor systems, e-mail, geographic information systems (GIS), calibration and measuring devices.

Employers interviewed for this report (i.e. Safeway, GMG Distributors, Give Something Back) indicated that there is a need for short-term training to prepare workers for entry-level, mid-level and supervisory positions in warehousing. The manager of Human Resources Development for the Northern California Division of Safeway, Inc. stated that Safeway recently had six opening at their Tracy warehouse facility for front-line supervisors. Unfortunately, she could not identify any qualified internal candidates to fill these positions, even though that was her preference. Safeway wants to be able to promote warehouse workers into supervisory positions, but their current workforce lacks the skills necessary to advance to this level.

Similarly, the Director of Human Resources for Give Something Back in Oakland is very interested in a career ladder approach that provides her entry-level warehouse employees training through the community colleges which will enable them to become more productive warehouse workers and eventually be promoted to supervisory positions.

A majority of employers expressed significant interest in partnering with community colleges to provide employee training that would make their employees and their business more productive.

## **Implications for Community Colleges**

Community colleges in the Bay Area are not currently offering training in warehousing, logistics or supply chain management. The community college nearest to the Bay Area that does offer a certificate program in this area is San Joaquin Delta College which has a Distribution and Transportation Supervisor Certificate.<sup>9</sup> The courses and programs in logistics and warehousing that exist within the California Community Colleges system are concentrated in Southern California. Other than courses on GIS, Total Quality Management, forklift operation, and basic skills, Bay Area colleges have no established course offerings supporting logistics or warehousing training.

Bay Area colleges have an opportunity to develop and offer training programs that address employers' needs for entry-level training and up-skilling of workers within the mid and advanced level of the field to support a career ladder concept. Moreover, little is being done to support a pipeline of new workers for entry-level positions to meet future anticipated demand. Finally, college faculty need training in order to teach the skill sets currently required by the logistics and warehousing industry, including the industry fundamentals they can infuse into existing language, mathematics, communication, and computer classes. Overall, there is a critical need to increase the Bay region's capacity to train workers for this quickly expanding field.

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<sup>9</sup> [www.cccco.edu](http://www.cccco.edu), search of TOP code #0510 (Logistics and Materials Transportation) for Bay Area colleges.

It is recommended that multiple short-term courses and industry-recognized certificate programs be offered through local community colleges for new and incumbent workers in the industry. Community colleges willing to partner with local businesses to collaboratively develop and implement courses that correspond to each rung of the warehousing career ladder (see page 9 of this report) will have an advantage in meeting the warehousing industry's training needs. Colleges who also partner with local Workforce Investment Boards to secure the funding for delivering customized, short-term certificate programs with wrap-around services to meet the needs of workers not used to participating in training and education programs, will improve their likelihood of success.

In addition, a more robust gap analysis needs to be completed which would include more employers from various sectors that utilize warehousing and logistics as a central part of their business operations. This more extensive analysis would help identify a more complete range of skills training needed by employees in this sector and prepare a community college's capacity to respond flexibly to the evolving training demands of this high-growth economic sector.

### Community College Programs Currently Available

College	Contact Info.	Program
San Bernardino Valley College Transportation Center	Kevin Anderson, Director <a href="mailto:Kanderso@sbccd.cc.ca.us">Kanderso@sbccd.cc.ca.us</a> Phone: (909) 382-4079 <a href="http://www.valleycollege.net/transportation">www.valleycollege.net/transportation</a>	Offers a Certificate in General Warehouse Operations; General Railway Operations and Truck and Bus Technology
Riverside Community College	Rex Beck, Instructor E-mail: <a href="mailto:rex.beck@rcc.edu">rex.beck@rcc.edu</a> Phone: (951) 372-7068 <a href="http://academic.rcc.edu/logistics%20management">http://academic.rcc.edu/logistics management</a>	Offers certificates in Logistics Management, or in Business Administration with Logistics Management Concentration; Associate Degrees in Logistics Management, or in Business Administration with Logistics Management Concentration
Chaffey College	Vanessa Thomas, Instructor <a href="mailto:Vanessa.Thomas@Chaffey.edu">Vanessa.Thomas@Chaffey.edu</a> Phone: (909) 477-8567 Kathy Dutton, Director of Econ. Development <a href="mailto:Kathy.Dutton@Chaffey.edu">Kathy.Dutton@Chaffey.edu</a> Phone: (909) 941-2730	In the process of developing new programs in logistics management (Degree and Certificate). Will be offered in the fall 2005. Also offers customized training, in partnership with businesses and the Workforce Investment Board.

## Conclusion

The warehousing industry in Alameda and Contra Costa counties is expected to grow by 24% and have 19,760 job openings (new and net replacements) between 2002 and 2012. This growth is linked closely to increases in international trade through the Port of Oakland and population increases in Bay Area Counties. It is an industry that cannot easily leave California and one that is increasingly adopting information technology. Warehousing is a sub sector of the Logistics & Distribution industry that offers blue collar workers with marginal education the opportunity to start work at reasonably good pay and move up a variety of skill ladders to much higher incomes.

Because this strategic possibility meets all of the stated criteria it is clearly a strategic opportunity that warrants an organized response from regional community colleges. Specifically, community colleges in Alameda and Contra Costa County should organize a response to meet the needs of the warehousing industry in their area. Community colleges can play an important role in supporting the warehousing industry in the Bay Region by developing a close working relationship with local firms and demonstrating their ability to provide skilled workers that meet industry standards. A career ladder approach that will help entry-level workers advance to front-line supervisor positions is a strategy that is recommended.

Community Colleges who can respond to this opportunity will be serving the best interests of their students and businesses in their community. This report clearly indicates that the best response will be one that is coordinated among industry associations, key employers and Workforce Investment Boards in order to have maximum impact.

Recent developments in colleges across the State suggest that some colleges are already organizing a response around these efforts. Several logistics focused Industry Driven Regional Collaborative grants (IDRC's) have been recently awarded through the System Office. A newly formed initiative, the Southern California Transportation and Logistics Institute, is a collaborative response involving selected community colleges, the System Office, the California Workforce Investment Board (C-WIB), the California Labor and Workforce Agency, and higher education partners. State and federal funding investments are anticipated to seed this initiative.

The Bay Region Center of Excellence will follow these developments and subsequently report back to regional colleges to help them stay abreast of industry trends, where there are still workforce needs and the successes of the college/industry partnerships that are being implemented. Colleges may then be better prepared to organize for response while leveraging the resources that come from these early efforts.

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## **APPENDIX A: How to Utilize this Report**

### ***About Us - Description of BWPI***

The Business and Workforce Performance Improvement (BWPI) initiative is focused on building the capacity of the colleges in the area of economic and workforce development to enhance their ability to deliver education and training services to businesses and workers in high growth industries, new technologies, and other clusters of opportunities.

The Centers of Excellence (COE) within BWPI provide information regarding workforce trends, increasing awareness and visibility about the colleges economic and workforce development programs and services, and building partnerships with business and industry.

The difference this will make to the colleges is that it will position them as THE workforce partners of choice to business and industry and ensure that college programs are current and responsive. This will contribute to the overall economic vitality of the communities in which they serve.

### ***How to Use This Strategic Possibility Report***

The Centers of Excellence within the Business and Workforce Performance Improvement Initiative of the California Community College Economic and Workforce Development Program have undertaken Industry Scanning to provide targeted and valuable information to community colleges on high growth industries and occupations.

This report, while not a full industry scan, is intended to assist the decision-making process of California community college administrators and planners in addressing local and regional workforce needs and emerging job opportunities in the workplace as they relate to college programs. The information contained in this report can be used to guide program offerings, strengthen grant applications, and support other economic and workforce development efforts.

This report is designed to provide current industry data that will:

- Define potential strategic opportunities relative to an industry's emerging trends and workforce needs;
- Influence and inform local college program planning and resource development; and
- Promote a future-oriented and market responsive way of thinking among stakeholders.

This Industry Scan included a review of the California Regional Economies Project reports and Employment Development Department (EDD) Labor Market Information (LMID) projections that cover the communities in this region, as well as many other sources as listed.

### ***Important Disclaimer:***

All representations included in this Environmental Scan product/study have been produced from a secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings. The purpose of the Environmental Scan is to assist the California Community Colleges to respond to emerging market needs for workforce performance improvement. However, neither the Business nor Workforce Performance Improvement Centers of Excellence, COE host college or California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon this study including components or recommendations.

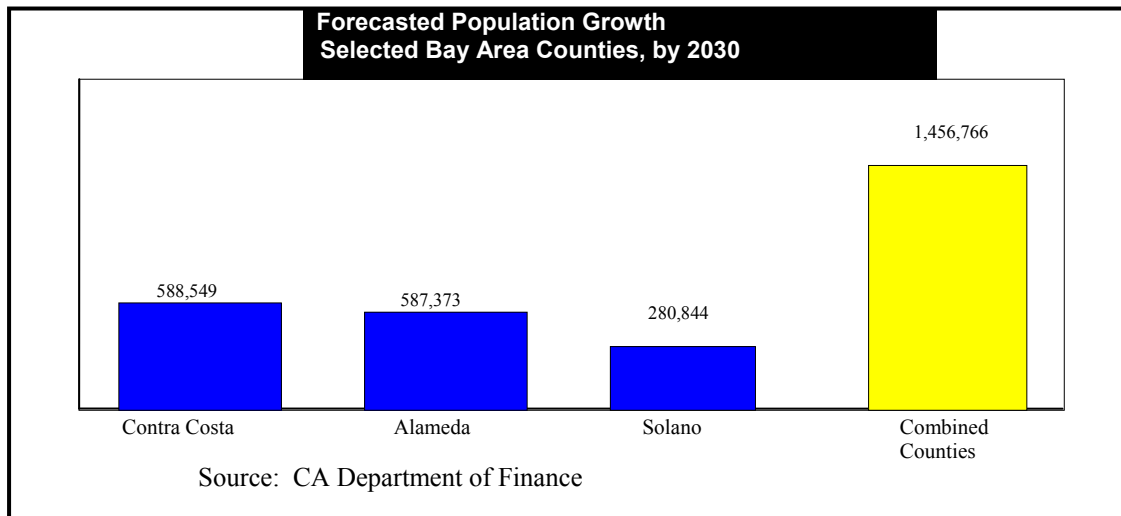
## APPENDIX B

### Container History – Port of Oakland TEU’s Activity (1992-2005)

Year	Import	Export	Total Empty	Grand Total	Trend *
1992	354,490	656,674	280,330	1,291,494	+8.1%
1993	365,114	667,879	272,141	1,305,134	+1.1%
1994	403,845	764,237	322,920	1,491,002	+14.2%
1995	404,842	809,894	335,150	1,549,886	+3.9%
1996	360,717	782,913	354,572	1,498,202	-3.3%
1997	398,157	769,172	363,858	1,531,187	+2.2%
1998	458,470	747,064	369,872	1,575,406	+2.9%
1999	469,226	798,873	404,657	1,663,756	+5.6%
2000	503,858	818,521	454,543	1,776,922	+6.8%
2001	486,389	758,958	398,238	1,643,585	-7.5%
2002	547,230	732,537	428,060	1,707,827	+3.9%
2003	599,411	799,547	524,146	1,923,104	+12.6%
2004	694,314	813,716	539,474	2,047,504	+6.5%
2005	836,258	846,579	591,153	2,273,990	+11.1%

Source: [www.portofoakland.com](http://www.portofoakland.com)

\* Denotes change versus same time period from previous year



## APPENDIX C: Occupational Projections - Warehousing Career Ladder

<b>Entry Level Production Occupations, Warehousing Industries Alameda &amp; Contra Costa Counties, 2002-2012</b>							
SOC Code	Occupational Title	Education & Training Level	2002 Jobs	2012 Jobs (New & Net Replacements)	Numerical Change in Job Openings	Percent Change in Job Openings	Median Hourly Wage
537062	Laborers & Freight, Stock & Material Movers, Hand	Short-Term On-the-Job Training	18,860	23,600	4,740	25%	\$11.53
435071	Shipping, Receiving, and Traffic Clerks	Short-Term On-the-Job Training	8,020	9,220	1,200	15%	\$13.93
512092	Team Assemblers	Short-Term On-the-Job Training	8,360	10,120	1,760	21%	\$15.12
537064	Packers and Packagers, Hand	Short-Term On-the-Job Training	6,040	7,530	1,490	25%	\$8.56
435111	Weighers, Measurers, Checkers, & Samplers, Recorder	Short-Term On-the-Job Training	560	790	230	41%	\$18.07
519031	Cutters and Trimmers, Hand	Short-Term On-the-Job Training	150	200	50	33%	\$15.23
	<b><u>TOTALS</u></b>		41,990	51,460	9,470	22.6%	\$13.74

Source: CA Employment Development Department

<b>Mid-Level Production Occupations, Machine Operators &amp; Tenders, Warehousing Alameda &amp; Contra Costa Counties, 2002-2012</b>							
SOC Code	Occupational Title	Education & Training Level	2002 Jobs	2012 Jobs (New & Net Replacements)	Numerical Change in Job Openings	Percent Change in Job Openings	Median Hourly Wage
519111	Packaging & Filling Machine Operators & Tenders	Moderate-Term On-the-Job Training	2,540	3,280	740	29%	\$12.69
537011	Conveyor Operators and Tenders	Moderate-Term On-the-Job Training	790	1,010	220	28%	\$14.35
514031	Cutting, Punching, and Press Machine Setters, Operators & Tenders	Moderate-Term On-the-Job Training	1,040	1,250	210	20%	\$17.44
517042	Woodworking Machine Setters, Operators, and Tenders	Moderate-Term On-the-Job Training	320	400	80	25%	\$12.91
519023	Mixing and Blending Machine Setters, Operators, and Tenders	Moderate-Term On-the-Job Training	560	660	100	18%	\$18.00
519032	Cutting and Slicing Machine Setters, Operators, and Tenders	Moderate-Term On-the-Job Training	350	440	90	26%	\$16.27
514199	Metal Workers and Plastic Workers, All Other	Moderate-Term On-the-Job Training	230	270	40	17%	\$14.35
519199	Production Workers, All Other	Moderate-Term On-the-Job Training	1,910	2,560	650	34%	\$9.55
537021	Crane & Tower Operators	Moderate-Term On-the-Job Training	280	350	70	25%	\$28.92
	<b><u>TOTALS</u></b>		8,020	10,220	2,200	27%	\$16.05

Source: CA Employment Development Department

<b>Advanced -Level Production Occupations, Warehousing Industries Alameda &amp; Contra Costa Counties, 2002-2012</b>							
<b>SOC Code</b>	<b>Occupational Title</b>	<b>Education &amp; Training Level</b>	<b>2002 Jobs</b>	<b>2012 Jobs (New &amp; Net Replacements)</b>	<b>Numerical Change in Job Openings</b>	<b>Percent Change in Job Openings</b>	<b>Median Hourly Wage</b>
499042	Maintenance and Repair Workers, General	Long-Term On-the-Job Training	8,810	11,230	2,420	27%	\$19.67
493042	Mobile Heavy Equipment Mechanics, Except Engines	Long-Term On-the-Job Training	1,220	1,510	290	24%	\$27.17
492092	Electric Motor, Power Tool, and Related Repairers	Long-Term On-the-Job Training	180	230	50	28%	\$19.37
499099	Installation, Maintenance & Repair Workers, Other	Long-Term On-the-Job Training	1,110	1,530	420	38%	\$18.69
512099	Assemblers and Fabricators, All Other	Long-Term On-the-Job Training	2,320	2,850	530	26%	\$11.23
499043	Maintenance Workers, Machinery	Long-Term On-the-Job Training	370	470	100	27%	\$21.00
512022	Electrical and Electronic Equipment Assemblers	Work Experience	3,080	3,400	320	10%	\$13.17
512041	Structural Metal Fabricators and Fitters	Moderate-Term On-the-Job Training	980	1,230	250	26%	\$17.53
	<b><u>TOTALS</u></b>		18,070	22,450	4,380	24%	\$18.48

Source: CA Employment Development Department

<b>First Level Production Supervisors &amp; Inspectors, Warehousing Industries Alameda &amp; Contra Costa Counties, 2002-2012</b>							
<b>SOC Code</b>	<b>Occupational Title</b>	<b>Education &amp; Training Level</b>	<b>2002 Jobs</b>	<b>2012 Jobs (New &amp; Net Replacements)</b>	<b>Numerical Change in Job Openings</b>	<b>Percent Change in Job Openings</b>	<b>Median Hourly Wage</b>
519061	Inspectors, Testers, Sorters, Samplers & Weighers	Work Experience	4,000	4,990	990	25%	\$15.19
511011	First-Line Supervisors/Managers of Production/Operation	Work Experience	5,030	6,370	1,340	27%	\$25.19
531021	First-Line Supervisors/Managers of Helpers, Laborers	Work Experience	1,220	1,540	320	26%	\$21.62
119199	Managers, All Other	Work Experience	3,820	4,880	1,060	28%	\$44.53
	<b><u>TOTALS</u></b>		14,070	17,780	3,710	26%	\$26.63

Source: CA Employment Development Department