

# Greater New Bedford Economic Base Analysis: Critical and Emerging Industries and Workforce Development Targets



PRESENTED TO THE  
**GREATER NEW BEDFORD WORKFORCE INVESTMENT BOARD, INC.**



by  
**UNIVERSITY OF MASSACHUSETTS DARTMOUTH  
CENTER FOR POLICY ANALYSIS**

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**UNIVERSITY OF MASSACHUSETTS DARTMOUTH  
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## **EXECUTIVE SUMMARY**

The Greater New Bedford Workforce Investment Area consists of the City of New Bedford and the Towns of Acushnet, Dartmouth, Fairhaven, Freetown, Lakeville, Marion, Mattapoisett, Rochester, and Wareham. The area occupies 276 square miles and has a population of 205,436. New Bedford accounts for nearly half of the area's population (45.6%). The area's population has increased by only 1.3 percent since 1990, compared to 5.4 percent for the state.

### **Area Employment and Unemployment**

Total employment for the Greater New Bedford Workforce Investment Area is 74,568 (1999). Total private sector employment is 64,141 (1999). Total employment dipped to its most recent trough in 1992 (66,631) and achieved its most recent peak in 1999 (74,568). The annual average unemployment rate for the Workforce Investment Area was 5.7 percent in 1999 compared to a statewide unemployment rate of 3.2 percent. Average unemployment rates in the area are consistently higher than the statewide average throughout all phases of the business cycle.

The two largest employment sectors in the Greater New Bedford Workforce Investment Area are services with 26 percent of total employment and retail and wholesale trade with 22 percent of total employment. Manufacturing in the area continues to account for a higher percentage of employment (19%) than the state as a whole. Most of the Workforce Investment Area's largest industries are in the manufacturing, retail trade, and service sectors. The area's single largest concentration of large establishments is still in the manufacturing sector.

The transportation, communications, and public utilities (TCPU) sector (20.6%), the service sector (19.9%), and the construction sector (15.3%) have shown the greatest percentage employment growth since 1992. The agriculture and fishing sector (-40.2%), finance, insurance, and real estate sector (-17.7%), and the manufacturing sector (-16.7%) have shown the greatest percentage decrease in employment.

### **Area Clusters**

A cluster is a group of firms in two or more industries linked together by shared customer, supplier, or other relationships. Clusters of competitive industries tend to concentrate geographically to take advantage of natural resources, specialized research and development facilities, local concentrations of industry-relevant labor skills, industry-specific infrastructure, inter-modal transportation networks, and other synergies attributable to business clusters. Critical clusters are

defined as those that employ 3 percent or more of the total private workforce in the Workforce Investment Area. An emerging cluster has shown substantial employment growth over the last decade. An emerging cluster can fall below the 3 percent threshold if it is showing rapid growth (e.g., from 1% to 2% of total employment over last 10 years).

The ten industry clusters identified in the Greater New Bedford Workforce Investment Area are:

**Critical and Emerging**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Retail Trade	21.7%
Allied Health Services	14.2%
Distribution	7.8%
High Technology	6.6%
Construction	6.4%
Social Services	3.7%

**Emerging**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Professional Services	2.4%

**Critical and Declining**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Textiles and Apparel	4.6%
Financial Services	3.2%

**Declining**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Seafood Products	2.9%

From 1992 to 1999, total employment showed a substantial increase in retail trade, allied health services, distribution, high technology, construction, and social services. Total employment declined in the financial services and textile and

apparel clusters, although both clusters remain critical to the area's economic and employment base. Total employment in the seafood products cluster declined, mainly as a result of significant employment losses in commercial fishing.

From 1992 to 1999, real wages fell in seven of the Workforce Investment Area's ten clusters. Real wages increased overall only in Professional Services, Financial Services, and Construction. However, eight employment sectors within the clusters showed substantial employment gains and real wage increases. The sectors are:

- Home health care (allied health services)
- Measuring and analyzing equipment (high-tech manufacturing)
- Special trade contractors (construction)
- Child care (social services)
- Residential services (social services)
- Engineering, Accounting, and Research (professional services)
- Securities and Commodities Brokers (professional services)
- Non-Depository Institutions (financial services)

An occupational analysis was conducted to determine the projected net job increase of the fastest growing occupations in the Greater New Bedford Workforce Investment Area. These occupations were selected from the twenty-five fastest growing occupations identified in "Regional Reports: Profile of Projected Job Growth" (Massachusetts Division of Employment and Training, 1996). Ten of the twenty-one occupations expected to have the largest net increases in jobs are listed in the table below. Many of the fastest growing occupations in the area require only short or moderate on-the-job training.

<b>Occupation</b>	<b>Net Projected Empl. Increase</b>	<b>Hourly Wage: 1998</b>
Home Health Aides	284	\$ 9.46
Personal and Home Care Aides	284	\$ 7.88
Human Services Workers	203	\$ 9.25
Medical Assistants	114	\$ 10.76
Physician Assistants	97	\$ 27.31
Social Workers, Medical and Psychiatric	92	\$ 20.44
Customer Service Reps.	88	\$ 10.28
Database Admin, Computer Specialists	82	\$ 29.21
Systems Analysts	62	\$ 23.50
Dental Hygienists	61	\$ 20.59



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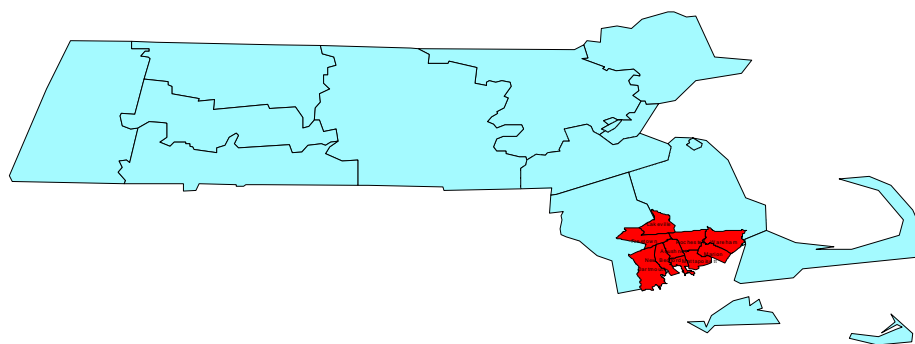


## **1.00 DESCRIPTION OF THE AREA**

The Greater New Bedford Workforce Investment Area consists of the City of New Bedford and the Towns of Acushnet, Dartmouth, Fairhaven, Freetown, Lakeville, Marion, Mattapoisett, Rochester, and Wareham (see Figure 1). The area occupies 276 square miles and has a population of 205,436 (U.S. Census Bureau, 2000). New Bedford accounts for nearly half of the area's population (45.6%).

**Figure 1**

### Greater New Bedford Workforce Investment Area



## **2.00 GREATER NEW BEDFORD – A PERIOD OF TRANSITION**

The New Bedford area's industrial history began in the early 1800s, when New Bedford became one of the wealthiest cities in the world as a result of the whaling industry. When the whaling trade began to decline in the 1870s, textile and apparel manufacturing emerged as the area's leading industry. Although textile and apparel firms began a southward migration in the 1890s, the city remained a major player in the textile and apparel industries until the late 1920s (Georgianna and Aronson 1993; Allen 1973; Hohman, 1928; McMullin 1976). The area's textile and apparel industries continued their slow decline as industry owners failed to invest in new technologies in contrast to Southern firms, which rapidly deployed the newest innovations in textile machinery (Wolfbein, 1944).

The area's industrial decline continued through the Great Depression and World War II, although it enjoyed a brief revival during the 1950's and 1960's as defense-related manufacturing expanded in response to the Cold War. Nevertheless, while other regions of the state were diversifying their economies, or nurturing high technology firms, new industries failed to emerge or locate in the New Bedford area, while existing firms often failed to modernize their plant, equipment, and products. By the mid-1980s, the dual forces of economic globalization and the adoption of computer-assisted production processes by other firms placed additional pressures on the area's manufacturing businesses.

While the area experienced an overall increase in total employment during the 1980's, the manufacturing sector went into a steep decline. From 1983 to 1990, over 370,000 private sector jobs were created in Massachusetts, but manufacturing lost nearly 73,000 jobs statewide (Southeastern Massachusetts Partnership, 1991). New Bedford and Fall River suffered the most significant manufacturing job losses in the state, accounting for 12.5 percent of the state's total manufacturing job loss. This was a severe blow to the New Bedford area given its dependence on manufacturing jobs, which accounted for 43.4 percent of the city's total private sector employment in 1985 compared to 21.1 percent of total private sector employment statewide at the time.

The cumulative effects of nearly three-quarters of a century of "de-industrialization" produced an acute employment shock in the area between 1985 and 1992 (Bluestone and Harrison 1982). The failure to modernize workforce skills, production technologies, and product development finally proved devastating to the area's economy as total employment in New Bedford declined 29.3 percent from 47,352 in 1985 to 36,628 in 1999. The erosion of New Bedford's manufacturing base accounts for a significant portion of the total employment decline. Between 1985 and 1999, manufacturing employment in New Bedford fell by 55.1 percent from 20,528 to 9,212. Thus, for more than a decade, the New Bedford area has struggled with the structural shocks of de-industrialization.

The results of the area's de-industrialization are straightforward. Median household income in New Bedford is only \$20,677 (1995) compared to a statewide median household income of \$38,574. New Bedford ranks as the 348th lowest income community among the 351 municipalities in Massachusetts. New Bedford's poverty rate is one of the highest in New England with 14.6 percent of the City's residents living below the official poverty level. Nearly 1 in 8 (11.9 percent) of New Bedford's residents live in subsidized public housing, while 17.1 percent of the City's residents receive some type of public assistance compared to the statewide average of 7.7 percent.

Only gradually and belatedly has the opposite process of “post-industrialization” begun to take hold in the area’s economy. The New Bedford area’s transition to a post-industrial economy is evident in the shift from “blue-collar” manufacturing to high-tech manufacturing and services (Bell 1972). Between 1960 and 1990, services replaced manufacturing as the single largest employment sector in the New Bedford area. Employment in manufacturing establishments declined from more than forty percent of the area’s total employment in 1960 to only 19 percent (19%) of current total employment (1999). As manufacturing employment declined, the service sector expanded to approximately one-quarter (26%) of the area’s total employment. Currently, Allied Health Services, Business Services, and Social Services are three of the most rapidly expanding employment sectors in the area and they are projected to remain at the forefront of the area’s employment growth in the next decade due to continuing population growth and the aging of the area’s population (Regional Employment Boards 1996; Borges and Barrow 1997). Professional Services has been identified as a small but emerging industry in the area.

Nevertheless, the New Bedford area still relies on the manufacturing sector for a substantial portion of its employment. Manufacturing not only accounts for nineteen percent (19%) of the area’s total employment, but manufacturing jobs are still some of the highest paying jobs in the area. Importantly, high technology has finally emerged as a critical industry in the New Bedford area’s manufacturing sector. Even the area’s “traditional” manufacturing base is less and less traditional as it introduces computer-assisted design and computer assisted manufacturing processes (CAD-CAM). The manufacturing sector is also shifting to “postindustrial” forms of production and delivery, such as just-in-time inventory management. Although the area’s manufacturing sector still faces stiff competition in the global market, the area’s business firms are finally positioned to make productivity gains through the implementation of new technology that will help negate the wage and cost advantages of national and global competitors.

In all likelihood, the area’s overall economy will be sustained by a high-tech renewal of manufacturing (especially electronics, instrumentation, telecommunications, and textiles and apparel), while much of the area’s new growth will develop around a mix of allied health services, business services, social services, and professional services. The prospect for continuing growth in retail trade will depend on the area’s ability to stem the outmigration of its young workers (18 to 34 year olds) and to reverse the pattern of declining real wages.

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### **3.00 GREATER NEW BEDFORD – TOWARD A WORKFORCE DEVELOPMENT STRATEGY**

The economic and fiscal crises of the early 1990s encouraged Massachusetts lawmakers to agree on a broad, bi-partisan policy consensus regarding economic development policy. The state's economic development policy owes a great deal to Michael Porter's, *The Competitive Advantage of Massachusetts*, which was commissioned in 1991 to help lay the foundations for a new consensus. Porter's work emphasizes that the main economic role of state government is to provide an environment that encourages private firms to achieve and maintain a competitive advantage in their particular industry. Porter's research suggests that macro-economic and fiscal policies alone cannot achieve this objective, since "clusters" of competitive industries tend to concentrate geographically to take advantage of natural resources, specialized research and development facilities, local concentrations of labor skills, industry-specific infrastructure, inter-modal transportation networks, and other synergies attributable to business clusters. The importance of geographically concentrated business clusters has made metropolitan and regional economies the strategic focus of competitive advantage. Consequently, an effective state economic development policy is based on a realistic assessment of the state's competitive position in key industries and a clear understanding of why certain industries cluster in particular regions of the state (Porter 1991, 11).

The University of Massachusetts and the Executive Office of Economic Affairs followed-up on these insights in 1993 with *Choosing to Compete: A Statewide Strategy for Job Creation and Economic Growth*. *Choosing to Compete* was a preliminary analysis of the state economy that identified seven regions: the Berkshire Region, Pioneer Valley Region, Central Region, Northeast Region, Greater Boston Region, Southeast Region, and the Cape and Islands Region. One of the report's main conclusions is that the state can best promote economic development by providing incentives and assistance to support regional competitiveness in targeted industries. Since these programs are most effective when implemented through partnerships with local and private organizations, the state's governing role is to provide strategic coordination of regional policy implementation.

In response to the region's employment crisis, the Southeastern Massachusetts Partnership sponsored the first comprehensive study of the region's economy drawing explicitly on the framework developed by Michael Porter in *The Competitive Advantage of Massachusetts*. In late 1991, the Partnership released *The High Skills Path for Southeastern Massachusetts: A Framework for Decisionmakers* and convened a conference of regional leaders to discuss its findings. The main conclusion of *The High Skills Path* was that policy makers, business executives, and educators needed "to attend to underlying structural problems" in the regional

economy before efforts to attract or retain businesses could be successful. The study identified the region's main structural problems as low adult educational attainment and a "modest base of higher education institutions" that was not adequate to support technological innovation. *The High Skills Path* called attention to "the critical importance of human capital" in economic development, which in Southeastern Massachusetts was not adequate to support the development of a post-industrial economy, whether based in knowledge-intensive service industries or high technology manufacturing.

Consequently, a central feature of the larger region's economic development strategy in the 1990s has been its focus on K-12 education, adult literacy, and the development of university research capacities. The passage of the Massachusetts Education Reform Act of 1993 reinforced this strategy, although the five cities and their adjacent communities are reporting different degrees of success in implementing this strategy. The entry of the Dartmouth campus into an expanded University of Massachusetts System in 1993 has improved the region's long-term capacity for technology transfer and professional assistance, but the campus is still early in its development as a university-level research institution.

The regional analysis of Southeastern Massachusetts in *Choosing to Compete* identified significant clusters in textiles and apparel, electronics and communications, marine science and technology, food processing, metals fabrication, fishing, and tourism. The report concludes that despite its economic difficulties, the region has several competitive advantages such as an extensive highway network, low business costs, low cost housing, and workforce availability in specialized industries and occupations. Nevertheless, the main conclusion of *Choosing to Compete* reinforced the Partnership's earlier findings in *The High Skills Path*. The business clusters that are key to the future prosperity of Southeastern Massachusetts, including its "traditional" manufacturing base – are finally implementing improvements in technology and productivity that create a need for new or upgraded skills and higher levels of educational attainment. Thus, *Choosing to Compete* concludes that new investment, education, workforce training, and technology transfer must be the main economic development priorities in Southeastern Massachusetts. However, it is important to recognize that the business clusters identified in *Choosing to Compete* are each heavily localized in different areas of the region.

The definition of "Southeastern Massachusetts" is a moving target not merely because of competing administrative, planning, or data collection purposes, but because the region is undergoing dramatic and uneven economic change that is blurring many previously accepted boundaries. The regional pattern of economic development is supporting a noticeable differentiation of areas within the region so it is widely recognized that in using any definition of Southeastern Massachusetts,

there are sub-regional identities and economic geographies that make it difficult to formulate a single definition that is appropriate for all purposes.

The U.S. Department of Labor identifies four labor market areas in Southeastern Massachusetts, including the Fall River, New Bedford, Brockton, and Boston labor market areas. Taunton and the Route 3 corridor are considered part of the Boston metropolitan statistical area, while Fall River and Attleboro are considered part of the Providence metropolitan statistical area. The Workforce Investment Boards identify four workforce investment areas in Southeastern Massachusetts that are used to deliver employment and training services. The four workforce investment areas are Bristol (Fall River-Taunton-Attleboro), Brockton, South Coastal (Route 3 corridor), and Greater New Bedford.

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#### 4.00 GREATER NEW BEDFORD - DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

##### 4.10 Population

The Greater New Bedford Workforce Investment Area has a population of 205,354 (U.S. Census Bureau 2000). The area municipalities with the largest populations are New Bedford (93,768) and Dartmouth (30,666) (see Table 1).

**Table 1**

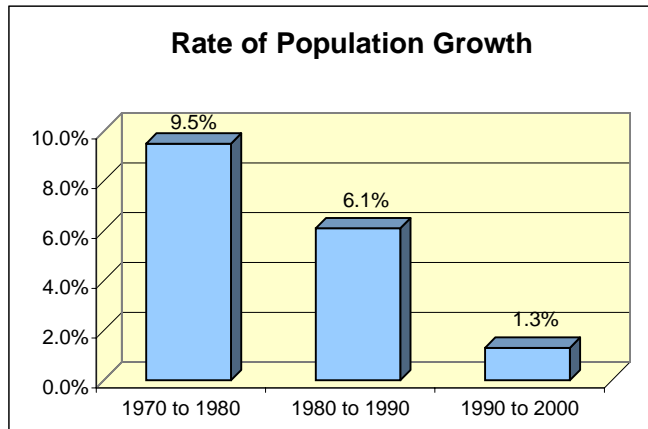
<b>Historical Population of Greater New Bedford WIA</b>				
<b>Cities and Towns</b>				
<b>Municipality</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
Acushnet	7,767	8,704	9,554	10,161
Dartmouth	18,800	23,966	27,244	30,666
Fairhaven	16,332	15,759	16,132	16,159
Freetown	4,270	7,058	8,522	8,472
Lakeville	4,376	5,931	7,785	9,821
Marion	3,466	3,932	4,496	5,123
Mattapoisett	4,500	5,597	5,850	6,268
New Bedford	101,777	98,478	99,922	93,768
Rochester	1,770	3,205	3,921	4,581
Wareham	11,492	18,457	19,232	20,335
<b>Total</b>	<b>174,550</b>	<b>191,087</b>	<b>202,658</b>	<b>205,354</b>

*Source: U.S. Census Bureau*

The area's population increased 17.6 percent from 1970 to 2000, compared to a statewide population increase of 11.6 percent. Since 1980, the area's population has increased 7.5 percent, compared to a 10.7 percent increase for the entire state. The area's population has increased by only 1.3 percent since 1990, compared to 5.4 percent for the state.

Figure 2 displays the decennial rate of population growth in the New Bedford Workforce Investment Area.

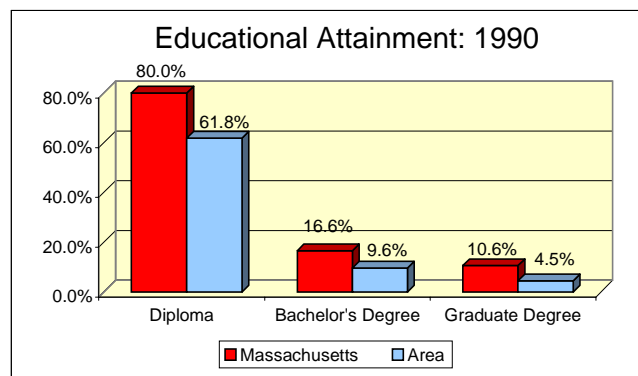
**Figure 2**



#### 4.20 Educational Attainment

While employers often compliment the area’s workforce for its dedication and motivation, much of the area labor force consists of low skilled workers with low levels of educational attainment. This is especially true in New Bedford, though many of the area’s suburban towns have educational attainment levels that are below state averages as well. For example, 38.2 percent of residents in the Workforce Investment Area do not have a high school diploma compared to 20.0 percent statewide. Similarly, only 14.1 percent of the area’s residents have earned a bachelor’s degree or higher compared to 27.2 percent statewide (see Figure 3).

**Figure 3**

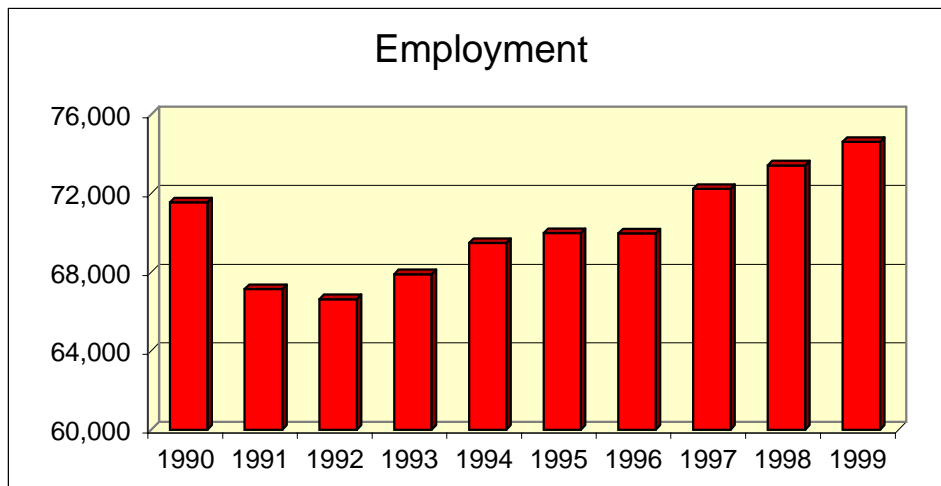


### 4.30 Income and Employment

Average annual wages in the Greater New Bedford Workforce Investment Area are \$29,011.<sup>1</sup> This compares to a statewide average of \$40,355. The area has total employment of 74,568 (1999 ES-202). Total private sector employment is 64,141 (1999 ES-202).

Figure 4 displays the total annual employment for the Greater New Bedford Workforce Investment Area from 1990 to 1999. Total employment dipped to its lowest level in 1992 (66,631) and reached its most recent peak in 1999 (74,568).

**Figure 4**



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<sup>1</sup> This figure includes government employees.

The 2000 annual average unemployment rate in the Workforce Investment Area was 4.8 percent. This compares to a statewide unemployment rate of 2.6 percent. As Figure 5 documents, average unemployment rates in the area are consistently higher than the statewide average throughout the business cycle.

**Figure 5**

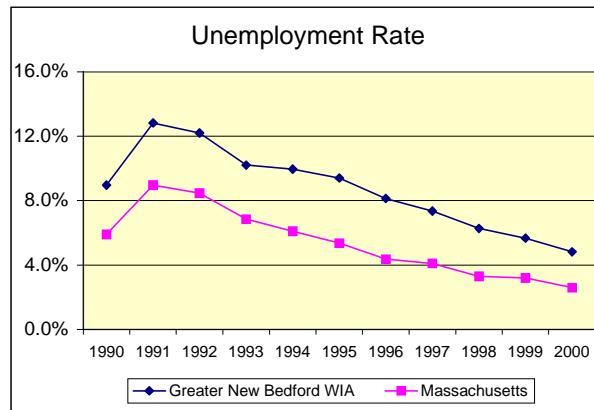


Table 2 shows the labor force of the Greater New Bedford Workforce Investment Area since 1990. The number of area residents who are employed has remained relatively constant during the last decade with 88,614 persons employed in 1990 and 88,552 employed in 2000. However, the area's labor force has declined by more than 4,900 persons from 97,935 in 1990 to 93,007 in 2000.<sup>2</sup>

**Table 2**

Greater New Bedford WIA Labor Force			
Year	Labor Force	Employment	Unemploy. Rate
1990	97,935	88,614	9.5%
1991	97,363	83,992	13.7%
1992	95,954	83,946	12.5%
1993	96,927	86,805	10.4%
1994	97,813	88,077	10.0%
1995	96,824	87,668	9.5%
1996	93,487	85,829	8.2%
1997	95,731	85,695	7.3%
1998	95,064	89,109	6.3%
1999	94,731	89,371	5.7%
2000	93,007	88,552	3.5%

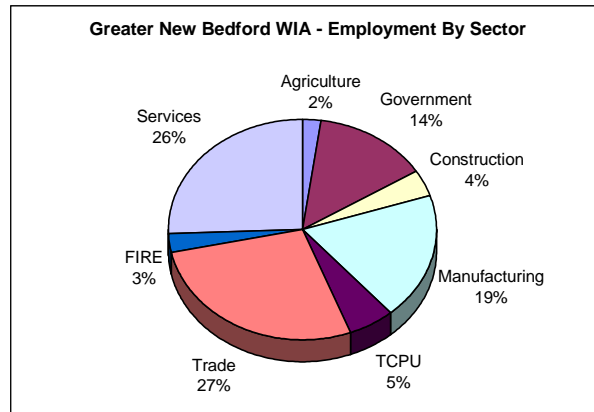
Source: Mass. DET LAUS File

<sup>2</sup> Labor Area Unemployment statistics measure the number of WIA residents who are employed or actively seeking work regardless of their worksite location. ES-202 data measures the number of jobs in the WIA regardless of the residential location of the persons employed in those jobs.

#### 4.40 Employment by Sectoral Distribution

Figure 6 displays annual employment by sector in the Greater New Bedford Workforce Investment Area (1999). The area's two largest employment sectors are trade with 27 percent of total employment and services with 26 percent of total employment. Manufacturing in the area continues to account for a higher percentage of employment than the state as a whole.

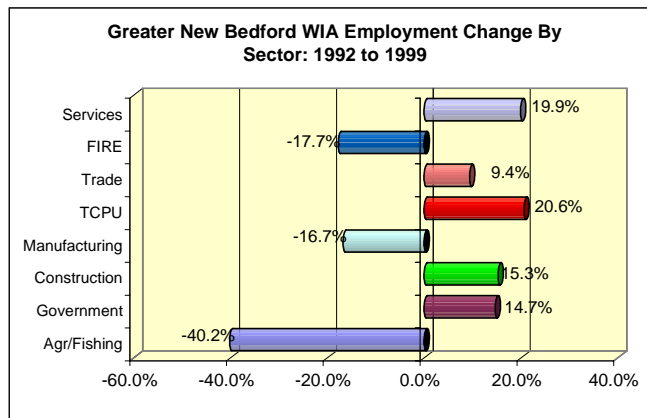
**Figure 6**



Source: Mass. Division of Employment and Training, 1999

Figure 7 displays percentage changes in employment for each sector between 1992 and 1999. The transportation, communications, and public utilities (TCPU) and service sectors have shown the greatest percentage employment growth since 1992, while agriculture and fishing has shown the greatest percentage decrease in employment.

**Figure 7**



Annual average wages in the area are \$29,011 (DET 1999). This continues a long-term pattern of area wage levels that are about 28 percent below the statewide average of \$40,355.

#### 4.50 Largest Industries by Employment

Table 3 shows the largest industries in the Greater New Bedford Workforce Investment Area by employment. Most of the largest industries are in the manufacturing, retail, and service sectors.

**Table 3**

<b>Greater New Bedford Workforce Investment Area Largest Industries by Employment, 1999</b>			
<b>SIC CODE</b>	<b>Industry Name</b>	<b>Employment</b>	<b>Establishments</b>
80	Health Services	9,103	293
58	Eating and Drinking Places	6,010	430
51	Wholesale Trade - Nondurable Goods	2,898	163
54	Food Stores	2,349	133
83	Social Services	2,348	160
23	Apparel and Other Textile Products	2,304	26
39	Miscellaneous Manufacturing Industries	2,243	10
59	Miscellaneous Retail	2,005	281
53	General Merchandise Stores	1,817	26
73	Business Services	1,565	180
55	Automotive Dealers & Service Stations	1,514	163
50	Wholesale Trade - Durable Goods	1,434	178
38	Instruments and Related Products	1,430	19
48	Communication	1,353	20
30	Rubber and Misc. Plastics Products	1,290	12
36	Electronic & Other Electric Equipment	1,287	14
56	Apparel and Accessory Stores	1,287	78
20	Food and Kindred Products	1,238	39
72	Personal Services	1,042	156

*Source: Massachusetts Division of Employment and Training*

#### 4.60 Largest Employers

As shown in Table 4, among the twenty largest employers in the Greater New Bedford Workforce Investment Area, the single largest concentration is still in the manufacturing sector.

**Table 4**

<b>Greater New Bedford Workforce Investment Area Largest Employers, 2001</b>		
Employer Name	Employment	City/Town
Southcoast Hospital Group	2,000	NB/Wareham
Titleist & Footjoy Worldwide	1,147	Fair/Dart.
UMass Dartmouth	1,100	Dartmouth
Acushnet Rubber Co., Inc.	950	New Bedford
Talbots, Inc.	800	Lakeville
Shaw's Supermarkets	736	NB/Fair/Dart
Aerovox Inc.	624	New Bedford
Ocean Spray	600	Lakeville
Riverside Manufacturing Co.	508	New Bedford
Polaroid Corp.	500	New Bedford
Bristol County Sheriff's Office	500	Dartmouth
City of New Bedford	400	New Bedford
Sippican, Inc.	360	Marion
Alleghany Technologies, Inc.	339	New Bedford
Sacred Heart Nursing Home	300	New Bedford
Madeira-Twin Fashions, Inc.	287	New Bedford
Volex Interconnect Systems	285	Dartmouth
Olin-Asahi Interconnect Tech	280	New Bedford
Brittany Dyeing & Printing Corp.	280	New Bedford

*Source: Dunn & Bradstreet Imarket Database*

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## 5.00 CLUSTER AND SECTOR ANALYSIS

The cluster and sector analysis identifies trends in private employment, business units, annual average wages, and average size of establishments at the 2-digit level of the Standard Industrial Classification (SIC) and, where possible, at the 3-digit SIC level.<sup>3</sup> The cluster and sector analysis relies primarily on ES-202 data, but also draws on proprietary databases (Imarket) and U.S. Census data (County Business Patterns). All data is aggregated at the level of the Greater New Bedford Workforce Investment Area.

A cluster is a group of firms in two or more industries linked together by shared customer, supplier, or other relationships. *Clusters* of competitive industries tend to concentrate geographically to take advantage of natural resources, specialized research and development facilities, local concentrations of industry-relevant labor skills, industry-specific infrastructure, inter-modal transportation networks, and other synergies attributable to business clusters. *Critical clusters* are defined as those that employ 3 percent or more of the total private workforce in the Workforce Investment Area. An *emerging industry* could fall below the 3 percent threshold if it is showing rapid growth (e.g., from 1% to 2% of total employment over last 10 years). Emerging and critical industries will be identified based on past and projected rates of growth in the number of business units and employment within the Greater New Bedford Workforce Investment Area. An industry may be both critical and emerging or it may be critical and declining.

In this report, the term *declining industry* refers exclusively to numerical employment trends. It does not necessarily provide insights into the profitability and financial health of an industry, the demand for its products or services, or the condition of individual firms within an industry. An industry can be shedding total employment, while increasing annual output, sales, and profits through organizational restructuring or technological innovations that allow firms in the industry to produce greater volumes of a good or service with fewer employees. It is also possible for individual firms to be stable or expanding within a declining industry due to higher than average productivity, superior marketing, or the capture of niche markets where they face little competition from other firms in the industry. The term also does not describe the quality of the jobs created or lost in a particular industry, since an expanding employment sector can be creating low-wage jobs with few benefits, while a declining sector could be restructuring its workforce to rely more heavily on high-wage skilled employees that achieve higher rates of productivity due to their use of technology.

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<sup>3</sup> Government accounted for fourteen percent of the Greater New Bedford Workforce Investment Area's total employment in 1999, an increase of 0.7 percent from 1992. The federal government accounted for 0.7 percent of the Workforce Investment Area's total employment, while state government accounted for 2.4 percent and local government accounted for 11.0 percent.

The ten industry clusters identified in the Greater New Bedford Workforce Investment Area are identified below:<sup>4</sup>

**Critical and Emerging**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Retail Trade	21.7%
Allied Health Services	14.2%
Distribution	7.8%
High Technology	6.6%
Construction	6.4%
Social Services	3.7%

**Emerging**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Professional Services	2.4%

**Critical and Declining**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Textiles and Apparel	4.6%
Financial Services	3.2%

**Declining**

<u>Cluster</u>	<u>% Of 1999 Private Sector Employment</u>
Seafood Products	2.9%

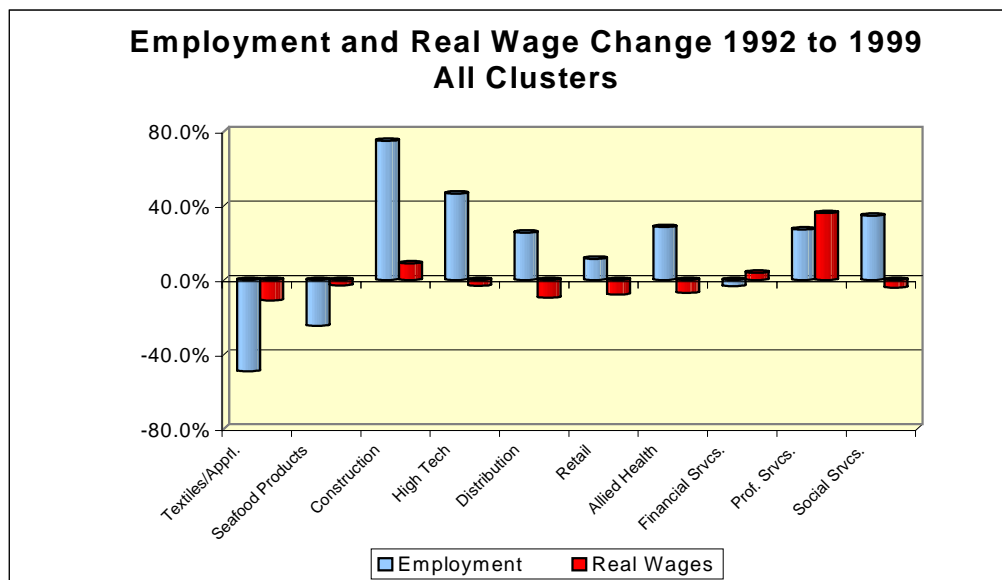
Eight of the ten clusters employ more than three percent of the Workforce Investment Area's total private sector workforce and thus meet the definition of a critical cluster. The Professional Services cluster employs less than three percent of the total private workforce, although the cluster has been identified as an emerging industry because it exhibited rapid growth during the 1990s. The Seafood Products

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<sup>4</sup> Metals manufacturing was considered as a possible cluster. However, the industry accounted for only 2.6 of the Greater New Bedford Workforce Investment Area's total private employment in 1999, a decline from 2.9 percent in 1992. Thus, the industry does not meet any of the cluster definitions identified earlier.

cluster also employs less than three percent (3%) of the area's private workforce and the industry continues to decline, mainly because of job losses in the commercial fishing industry (see Figure 8).

**Figure 8**



## 5.10 CRITICAL AND EMERGING CLUSTERS

### 5.11 Retail Trade

The Retail cluster includes the following:

- General Merchandise Stores (SIC 53)
- Food Stores (SIC 54)
- Apparel & Accessory Stores (SIC 56)
- Furniture and Equipment (SIC 57)
- Eating & Drinking (SIC 58)
- Miscellaneous Retail (SIC 59)

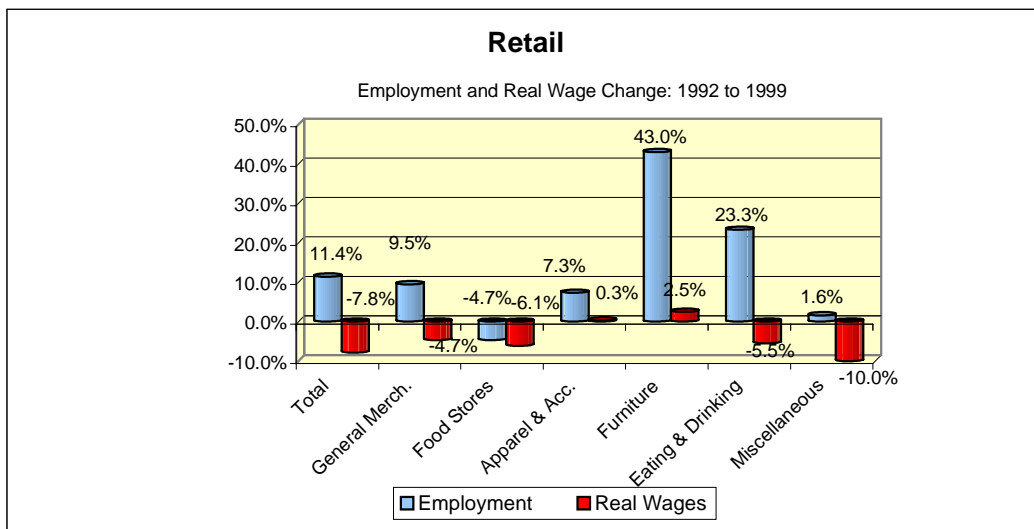
General merchandise stores include department and variety stores. Food stores include grocery stores, fruit and vegetable markets, etc. Apparel stores sell items such as shoes and clothes. Furniture and equipment stores include furniture for the home, household appliances, curtains, and radio, television and consumer electronics. Eating and drinking consists of restaurants and bars. Miscellaneous retail includes establishments such as drug stores, liquor stores, and bookstores.

Retail is a critical and emerging cluster that accounts for 21.7 percent of the area's total employment or 13,907 jobs (1999). Total employment in the cluster increased from 12,479 in 1992 to 13,907 in 1999 (11.4 percent) (see Figure 9). Employment increases were most significant in furniture and equipment (43.0 percent) and eating and drinking establishments (23.3 percent). Eating and drinking establishments also had the highest level of employment (6,010), followed by food stores (2,349), miscellaneous retail (2,005), and general merchandise stores (1,817).

The number of business units declined in all sectors but furniture and equipment (increase of 6 units) and eating and drinking establishments (increase of 30 units). Most of the businesses in the cluster are small (less than 30 employees) although general merchandise stores are larger on average. The largest employers in the cluster include Shaw's Supermarkets, Stop and Shop Supermarket, Talbots, Sears, and JC Penny.

Average annual wages in the cluster are well below the Workforce Investment Area and state average and range from a low of \$9,880 in eating and drinking establishments to \$20,632 in furniture and equipment. Real wages in the sector decreased by 7.8 percent from 1992 to 1999 and declined in all sectors but apparel and furniture and equipment. Thus, while employment in the retail cluster is growing, most of the growth is concentrated in low paying and part-time jobs.

**Figure 9**



## **5.12 Allied Health Services**

The Allied Health Services cluster includes the following industries:

- Offices and Clinics of Doctors of Medicine (SIC 801)
- Offices and Clinics of Dentists (SIC 802)
- Offices and Clinics of Doctors of Osteopathy (SIC 803)
- Offices and Clinics of Other Health Practitioners (SIC 804)
- Nursing and Personal Care Facilities (SIC 805)
- Hospitals (SIC 806)
- Medical and Dental Laboratories (SIC 807)
- Home Health Care Services (SIC 808)
- Miscellaneous Health and Allied Services (SIC 809)

In contrast to the Boston Metro and Worcester areas, there are no major research hospitals or institutes located in the Greater New Bedford Workforce Investment Area. Consequently, the allied health services cluster serves local demand generated by the area's residents. During the 1990s, the cluster's expansion was being driven almost exclusively by population growth and by the availability of Medicare and Medicaid reimbursements for services to elderly and low-income residents (Bristol, Brockton, Greater New Bedford, and South Coastal Regional Employment Boards 1995). ; Center for Policy Analysis 2000).

Allied health services is a critical and emerging cluster that accounts for 14.2 percent of the area's total employment or 9,118 jobs (1999). The number of jobs in the cluster increased from 7,097 in 1992 to 9,118 in 1999 (28.5 percent). Most employment gains have been concentrated in the delivery of services such as nursing homes and home health care where average wages are well below the area average (see Figure 10). At the same time, restructuring and cost-cutting in the hospital industry, where average wages are significantly higher, has resulted in an employment gain of only 0.1 percent during the 1990s.

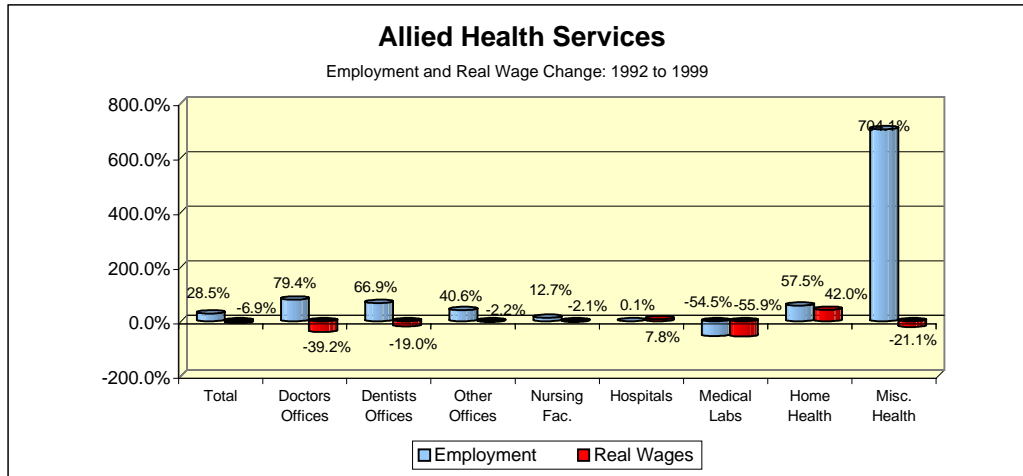
The largest employers in the cluster are nursing facilities (2,759) and hospitals (2,593). Employment increases have occurred in all of the cluster's industries except for medical and dental laboratories, although this industry employed only five employees in 1999. The largest employment increases occurred in miscellaneous health and allied services (704.1 percent) and doctors offices (79.4 percent).<sup>5</sup> However, real wages have decreased in these sectors by 21.1 percent and 39.2 percent respectively. Overall, real wages in the cluster have decreased by 6.9 percent from 1992 to 1999. Average annual wages in the cluster range from a low of \$9,755 in medical and dental labs to \$46,314 for doctors offices.

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<sup>5</sup> Miscellaneous allied services includes kidney dialysis centers and other specialty outpatient facilities.

The number of business units remained relatively stable from 1992 to 1999. The largest employers in the cluster are hospitals, including St. Luke's Hospital in New Bedford and Tobey Hospital in Wareham.

**Figure 10**



### 5.13 Distribution

The Distribution cluster includes the following:

- Motor freight transportation – (SIC 42)
- Wholesale trade – durable goods (SIC 50)
- Wholesale trade – nondurable goods (SIC 51)
- Deep Sea Foreign Trans. Of Freight (SIC 441)
- Water Trans. Of Freight not Elsewhere Classified (SIC 444)

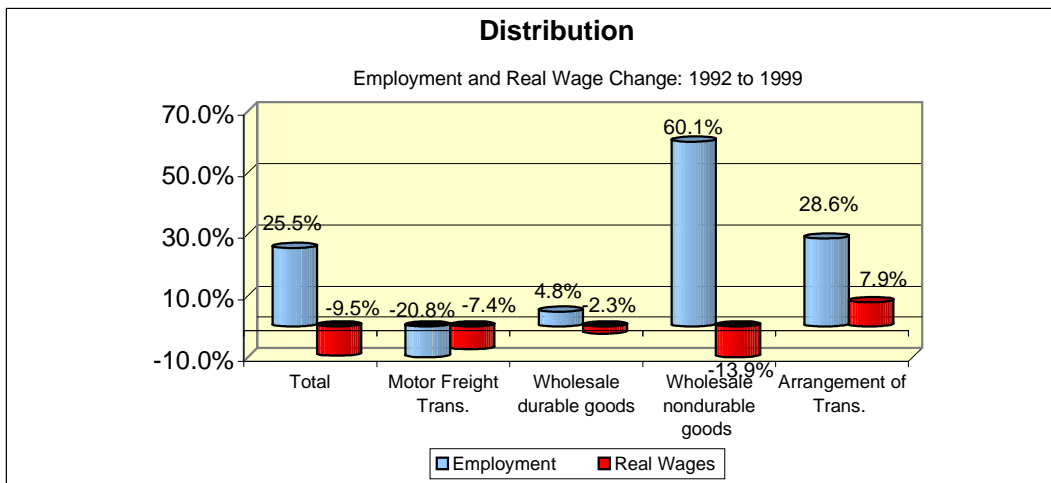
Motor freight transportation includes establishments furnishing local or long-distance trucking or transfer services. Wholesale trade - durable goods includes establishments primarily engaged in the wholesale distribution of durable goods, such as lumber and other construction materials. Wholesale trade - nondurable goods includes establishments engaged in the wholesale distribution of nondurable goods including drugs and drug proprietaries; groceries; and other related products.

Distribution is a critical and emerging cluster and accounts for 7.8 percent of the area's total employment or 5,013 jobs (1999). Total employment in the cluster increased from 3,995 in 1992 to 5,013 in 1999 (25.5 percent) (see Figure 11). Employment increases were most significant in the wholesale trade of non-durable

goods (60.1 percent). This industry also has the highest level of employment (2,898), followed by wholesale trade – durable goods (1,434), and motor freight transportation (608). There were only small levels of employment in the cluster’s other industries. The majority of businesses in the cluster are small with less than 20 employees. The number of business units in the cluster increased from 385 in 1992 to 422 in 1999. The largest employers in the cluster include Sid Wainer & Son, Atlas Screw and Specialty, and Maritime Terminal in New Bedford.

Average annual wages in the cluster are above the Workforce Investment Area average and range from a low of \$30,236 in wholesale trade – nondurable goods to a high of \$46,074 in water transportation. However, real wages in the sector declined by 9.5 percent from 1992 to 1999 and declined in the cluster’s three largest industries - motor freight transportation, wholesale trade – durable goods, and wholesale trade – nondurable goods.

**Figure 11**



## 5.14 High Technology

The High Technology Cluster includes the following industries:

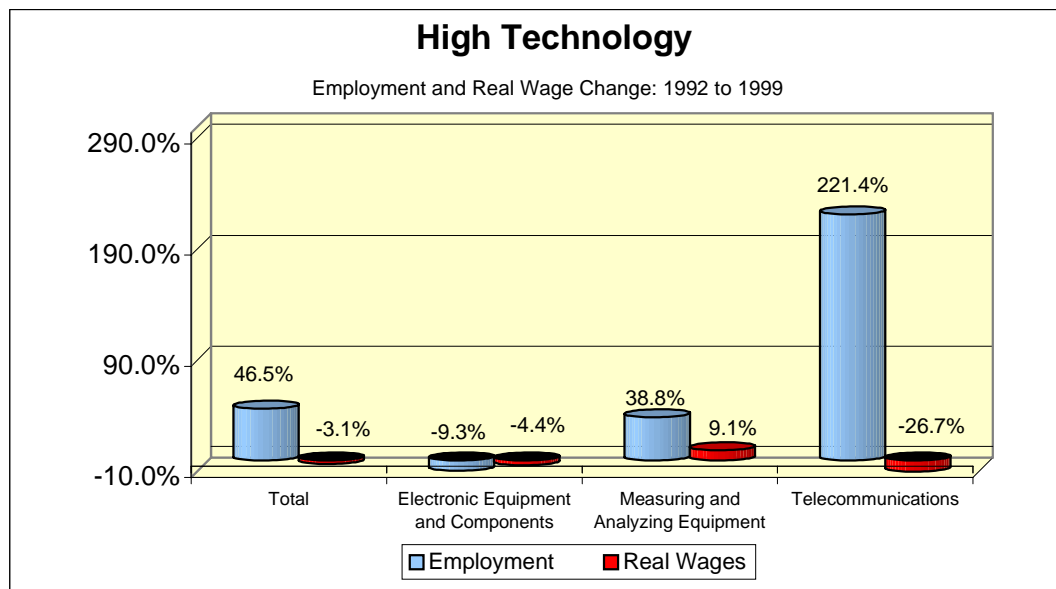
- Electronic Equipment and Components (SIC 36)
- Measuring and Analyzing Equipment (SIC 38)
- Computer and Office Equipment (SIC 357)
- Telecommunications (SIC 48)

Electronic equipment and components includes establishments engaged in the manufacturing of electricity distribution equipment and other electrical equipment and supplies. Measuring and analyzing equipment includes establishments engaged in manufacturing instruments for measuring, testing, analyzing, and controlling. Computer and office equipment includes establishments that engage in the manufacturing of electronic computers, computer storage devices, and computer terminals. Telecommunications includes establishments supplying point-to-point communications services and radio and television broadcasting.

High technology is a critical and emerging cluster. Total employment for the cluster increased by 46.5 percent from 1992 to 1999 (see Figure 12). The high technology cluster accounted for 6.6 percent of the area's total employment in 1999, or 4,205 jobs. Much of the employment gain is fueled by the telecommunications industry, which added 932 jobs from 1992 to 1999. However, real wages for this industry declined by 26.7 percent. Most of the growth in telecommunications was fueled by AT&T, which became the area's primary cable television operator in 1999 and also reopened its Fairhaven facility. The measuring and analyzing equipment industry had the highest level of employment in the cluster (1,430), followed by telecommunications (1,353), and electronic equipment and components (1,287). The number of business units in the cluster increased from 39 in 1992 to 57 in 1999 and the average size of the establishments is fairly large (more than 60 employees per unit). The cluster's largest employers in the area include AT&T in Fairhaven, Polaroid and Aerovox in New Bedford, and Sippican in Marion.

Real wages in the cluster overall declined by 3.1 percent from 1992 to 1999. Average annual wages in the cluster are above the area average and range from a low of \$29,927 in the electronic equipment and components industry to \$55,527 in the measuring and analyzing equipment industry.

**Figure 12**



### 5.15 Construction

The Construction cluster includes the following:

- General Building Contractors (SIC 15)
- Heavy Construction (SIC 16)
- Special Trade Contractors (SIC 17)
- Building Materials (SIC 52)

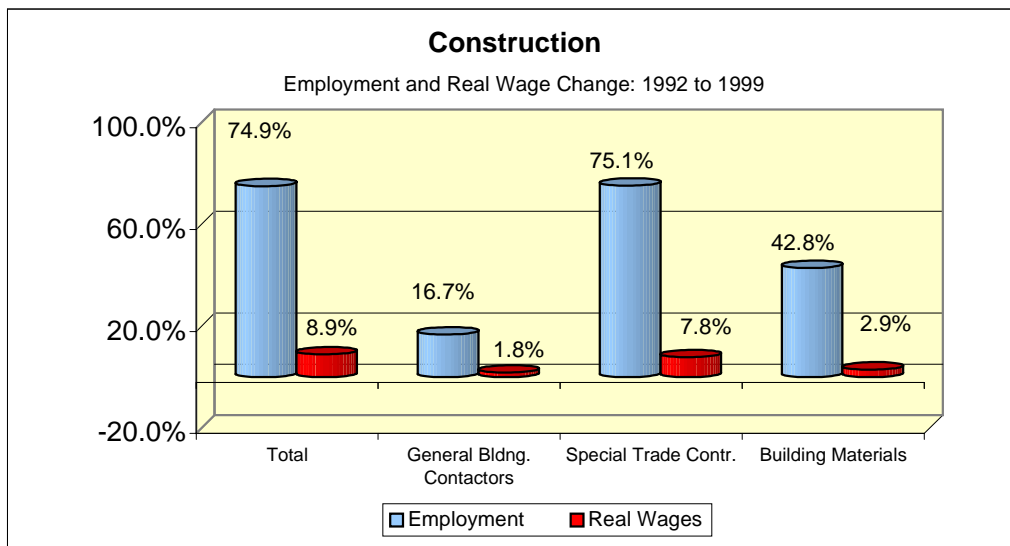
General building contractors include builders of homes, industrial, commercial properties. Heavy construction includes the construction of roads, railways, bridges, etc. Special trade contractors include electricians, carpenters, plumbers, etc. Building materials consists of retail establishments that sell lumber and other building materials.

Construction is a critical and emerging cluster; the cluster accounts for 6.4 percent of the area's total employment or 4,077 jobs. Total employment for the sector increased from 2,331 in 1992 to 4,077 in 1999 (74.9 percent) (see Figure 13). Employment increases were most significant in the special trade contractors industry (75.1 percent). This industry also has the highest level of employment (2,141), followed by building materials (828), general contractors (616), and heavy construction (492). The construction industry is very cyclical and much of the

growth is connected to the overall health of the economy. It is not clear what proportion of the employment growth in construction is merely cyclical as opposed to long-term growth in the cluster. As the economy slows, it is likely to have a greater effect on employment levels in the construction industry than many other clusters identified in this report.

The number of business units in construction has increased in all industries except building materials, which lost 12 units from 1992 to 1999. This may be a result of smaller stores closing due to competition from larger home improvement stores such as Home Depot. Most of the businesses in the cluster are small with less than 20 employees. Real wages in the sector increased by 8.9 percent from 1992 to 1999. Real wages rose modestly in each industry. Average annual wages in the cluster range from a low of \$25,875 in building materials to \$32,001 for general contractors.

**Figure 13**



### 5.16 Social Services

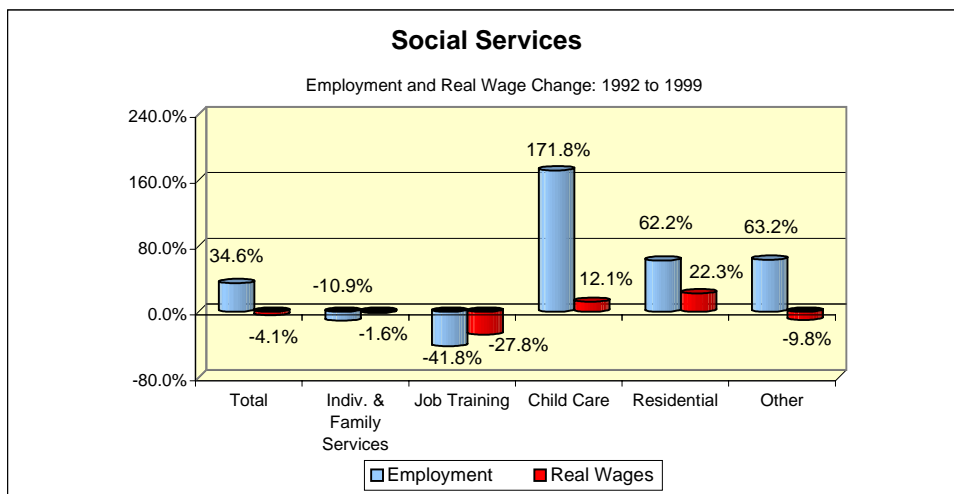
The Social Services cluster includes the following:

- Individual & Family Services (SIC 832)
- Job Training & Related Services (SIC 833)
- Child Care (SIC 835)
- Residential Care (SIC 836)
- Social Services Not Elsewhere Classified (SIC 839)

The Social Services group includes establishments providing social services and rehabilitation services to those persons with social or personal problems requiring special services and to the handicapped and disadvantaged.

The Social Services cluster is a critical and emerging cluster that accounts for 3.7 percent of the area’s total employment or 2,348 jobs. Total employment in the cluster increased from 1,745 in 1992 to 2,348 in 1999 (34.6 percent) (see Figure 14). The largest employment sectors in the cluster are child care (761), residential care (754), and individual and family services (667). Child care and residential care also experienced the greatest increases in the number of business units from 1992 to 1999. Most of the social service establishments are small (less than 30 employees). The largest employer in the cluster is Better Community Living, Inc. in New Bedford. Real wages in the cluster declined by 4.1 percent from 1992 to 1999. Real wages rose most significantly in residential care and child care, though these wages remain well below the state average. Average annual wages in the cluster are below the workforce investment area and state average and range from a low of \$15,870 in child care to a high of \$26,115 in other social services.

**Figure 14**



## **5.20 EMERGING CLUSTER**

### **5.21 Professional Services**

The Professional Services cluster includes the following:

- Legal Services (SIC 81)
- Engineering, Accounting, Research, Management (SIC 87)
- Advertising (SIC 731)
- Computer Programming, Data Processing, Other Computer (SIC 737)

Legal services include establishments that are headed by attorneys. Engineering, accounting, research, management include establishments primarily engaged in providing engineering, architectural, and surveying services; accounting, auditing, and bookkeeping services; research, development, and testing services; and management and public relations services. Advertising includes establishments primarily engaged in preparing advertisements and placing them in periodicals, newspapers, radio and television. Computer programming and data processing includes establishments primarily engaged in providing computer programming services, designing, developing, and producing prepackaged computer software, designing computer integrated systems, and on-line information retrieval services.

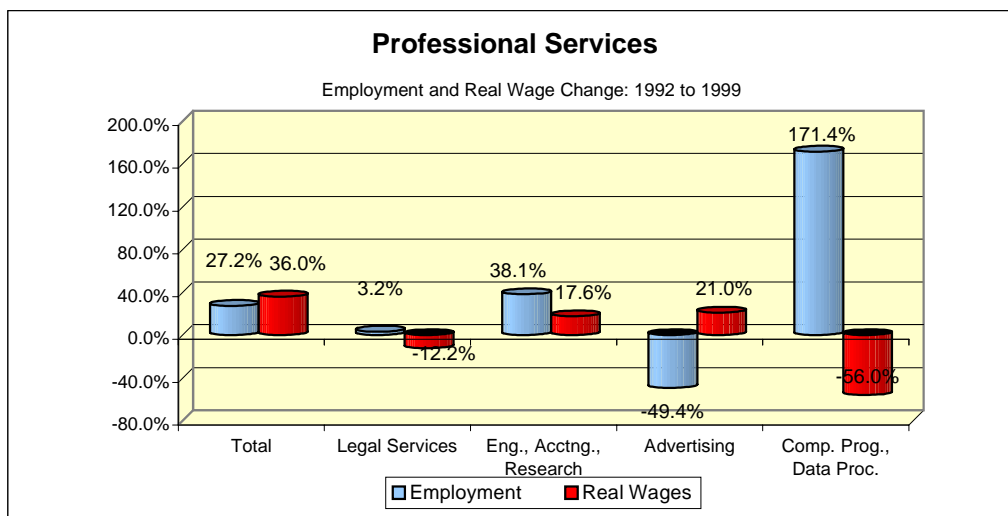
The Professional Services cluster accounts for only 2.4 percent (1999) of the Workforce Investment Area's employment and thus does not meet the definition of a critical cluster (3.0 percent or greater). However, the cluster does meet the definition of an emerging industry, with employment increasing from 1,234 in 1992 to 1,570 in 1999 (27.2 percent) (see Figure 15). Employment gains are being fueled by the computer programming sector and the engineering, accounting, and research sector, which experienced employment gains of 171.4 percent and 38.1 percent respectively. Employment in the advertising industry declined by 49.4 percent over this period, although this industry had only 45 employees in 1999.

The number of business units in the cluster increased significantly from 183 units in 1992 to 348 units in 1999. The engineering, accounting, research, and management industry gained 169 units over this period. Most of the businesses in the cluster are small (less than 30 employees). The largest employers in the cluster are National Sales Services in Fairhaven and Affiliated Professional Services in Wareham.

Real wages in the cluster increased by 36.0 percent from 1992 to 1999. Average annual wages in the cluster are above the Workforce Investment Area

average and range from a low of \$32,611 in advertising to a high of \$41,216 in engineering, accounting, and research.

**Figure 15**



### 5.30 CRITICAL AND DECLINING CLUSTERS

#### 5.31 Textile and Apparel

The Textile and Apparel Cluster includes two major groups:

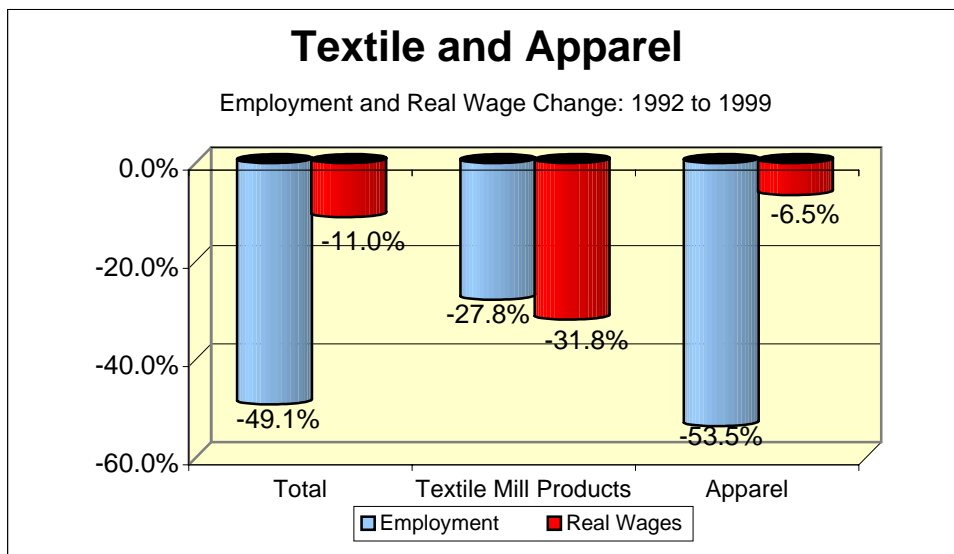
- Textile Mill Products (SIC 22)
- Apparel Products (SIC 23)

The textiles and apparel cluster consists of firms that manufacture fabrics, yarn, and thread, as well as those that dye and finish fabric and knit apparel. Textiles and apparel is a critical but declining cluster that accounts for 4.6 percent of the Workforce Investment Area's private employment or 2,944 jobs (1999). Total employment in the cluster declined from 5,784 in 1992 to 2,899 in 1999 (49.1 percent) (see Figure 16). The most significant job losses were experienced in apparel, where employment declined from 4,960 in 1992 to 2,304 in 1999. Textile employment declined from 824 to 595 over the same period. Despite the employment decline, the number of establishments in the textile industry increased from 13 in 1992 to 14 in 1999, while the number of establishments in the apparel industry declined from 38 to 26. The average size of textile firms decreased from 63 employees in 1992 to 43 employees in 1999. The average size of apparel firms decreased from 131 employees to 89 employees per firm (Barrow 2000).

Textiles and apparel are considered low-wage industries, though this is less true of textiles than for apparel. Average annual wages in the cluster range from a low of \$19,916 in the apparel industry to a high of \$30,193 in the textile industry. Real wages in the sector decreased by 11.0 percent from 1992 to 1999. The textile industry experienced a decline in real wages of 31.8 percent over this period while the apparel industry experienced a decline in real wages of 6.5 percent.

Most of the economic activity in the Workforce Investment Area's textiles and apparel sector is concentrated in the City of New Bedford where approximately one out of every 12 jobs still depends on the textile and apparel industries. The largest textile and apparel companies in the area include Riverside Manufacturing, Julius Koch, Brittany Dyeing and Printing, and Madeira-Twin Fashions. Importantly, the latest annual ES-202 data is from 1999. Since then, several companies in the area have closed or cut their workforces. For example, Cliftex Corporation and Calvin Klein have closed and several other large employers have initiated lay-offs.

**Figure 16**



### **5.32 Financial Services**

The Financial Services cluster includes the following industries:

- 60 Depository Institutions
- 61 Non-Depository Institutions
- 62 Securities & Commodities Brokers
- 63 Insurance Carriers
- 64 Insurance Agents
- 65 Real Estate
- 67 Holding & Other Investment Companies

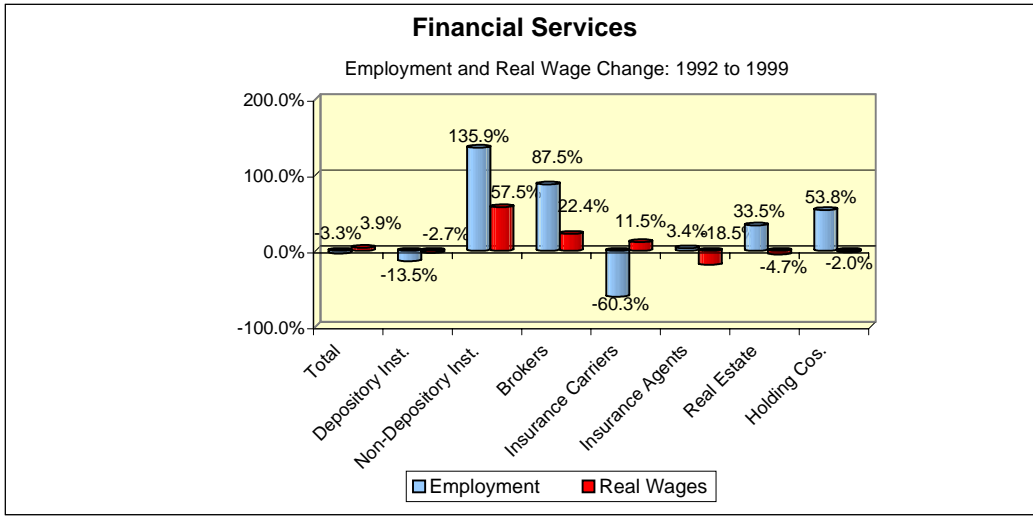
Depository institutions include establishments such as commercial banks and savings institutions. Non-depository institutions include establishments engaged in extending credit in the form of loans. Security and commodity brokers includes establishments engaged in the underwriting, purchase, sale, or brokerage of securities. Insurance carriers include carriers of insurance of all types, while insurance agents include agents and brokers dealing in insurance, and organizations offering services to insurance companies and to policyholders. Real estate includes real estate operators, and owners and lessors of real property, as well as buyers, sellers, developers, agents, and brokers. Holding and other investment offices include investment trusts, investment companies, holding companies, and miscellaneous investment offices.

Financial Services is a critical but declining cluster that accounts for 3.2 percent of the area's total employment or 2,080 jobs. Total employment in the cluster decreased from 2,151 in 1992 to 2,080 in 1999 (3.3 percent) (see Figure 17). This decrease was primarily a result of employment declines among insurance carriers (60.3 percent) and depository institutions (13.5 percent). Much of the employment decline is due to consolidation and restructuring in both sectors. Significant employment gains were experienced in the non-depository institutions (135.9 percent) and securities and commodities brokers (87.5 percent), although this industry accounts for only 75 jobs. The largest employers in the cluster are depository institutions (971) and insurance agents (390).

Overall, the number of units in the cluster has increased from 296 in 1992 to 329 in 1999. The most significant gains in business units occurred in real estate. Most of the businesses in the cluster tend to be small (less than 20 employees). The largest employer in the cluster is Compass Bank in New Bedford.

Real wages in the cluster increased by 3.9 percent from 1992 to 1999. Average annual wages in the cluster range from a low of \$23,599 in real estate to a high of \$118,353 in securities and commodities brokers. Real wages rose most significantly in non-depository institutions (57.5 percent) and securities and commodities brokers (22.4 percent).

**Figure 17**



## **5.40 DECLINING CLUSTER**

### **5.41 Seafood Products**

The Seafood Products cluster includes the following<sup>6</sup>:

- Commercial Fishing (SIC 091)
- Aquaculture (SIC 092)
- Seafood Processing (SIC 209)
- Ship Building and Repair (SIC 373)

Commercial fishing includes finfishing and shellfishing, while aquaculture includes fish hatcheries. Seafood processing includes the canning and preparation of fresh and frozen seafood. Ship building and repair includes establishments engaged in building and repairing boats.

Seafood Products is a declining industry. Total employment for the cluster decreased by 24.7 percent from 1992 to 1999 (see Figure 18). The cluster accounts for 2.9 percent of the area's total employment or 1,837 jobs (1999). Employment in the cluster declined from 2,441 jobs in 1992 to 1,837 jobs in 1999. The cluster's declining status is exclusively the result of job losses in the commercial fishing industry, which suffered a 50.7 percent employment loss from 1992 to 1999. Other industries in the cluster are experiencing employment gains. Employment in seafood processing increased by 27.7 percent and employment in ship building and repair increased by 16.9 percent from 1992 to 1999. However, real wages in both these industries are declining, while wages in commercial fishing are rising. The seafood processing industry had the highest level of employment in the cluster (857), followed by fishing (793) and ship building and repair (187).

The number of establishments in the commercial fishing industry declined from 251 in 1992 to 186 in 1999. Much of the decrease is due to declining fish stocks and government regulations that limit catch volume and the number of days that certain species can be fished. The number of establishments in the seafood processing industry increased from 27 to 30 over this period, while the ship building and repair industry increased from 16 to 21 units. The cluster's largest employers in the area are seafood processing plants and include Eastern Fisheries, Atlantic Coast Fisheries Corp., and American Seafoods International (University of Massachusetts Donahue Institute and Center for Policy Analysis 2000).

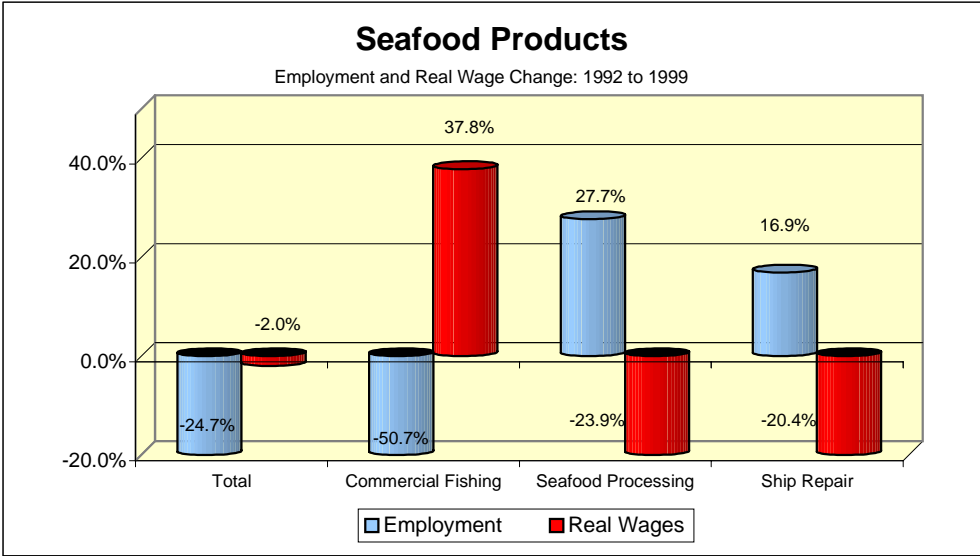
Average annual wages in the cluster range from a low of \$25,557 in the seafood processing industry to \$60,219 in the commercial fishing industry. Real

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<sup>6</sup> Data for Aquaculture was confidential. However, Imarket data indicates that there is at least one employer with five employees in the Greater New Bedford Workforce Investment Area.

wages in the sector decreased by 2.0 percent from 1992 to 1999. Real wages increased by 37.8 percent in the commercial fishing industry, while real wages declined by 23.9 percent in seafood processing and 20.4 percent in ship repair. Thus, the industries that have exhibited employment growth are experiencing real wage declines. Conversely, real wages in commercial fishing, which has lost more than half of its employment from 1992 to 1999, are growing significantly.

**Figure 18**

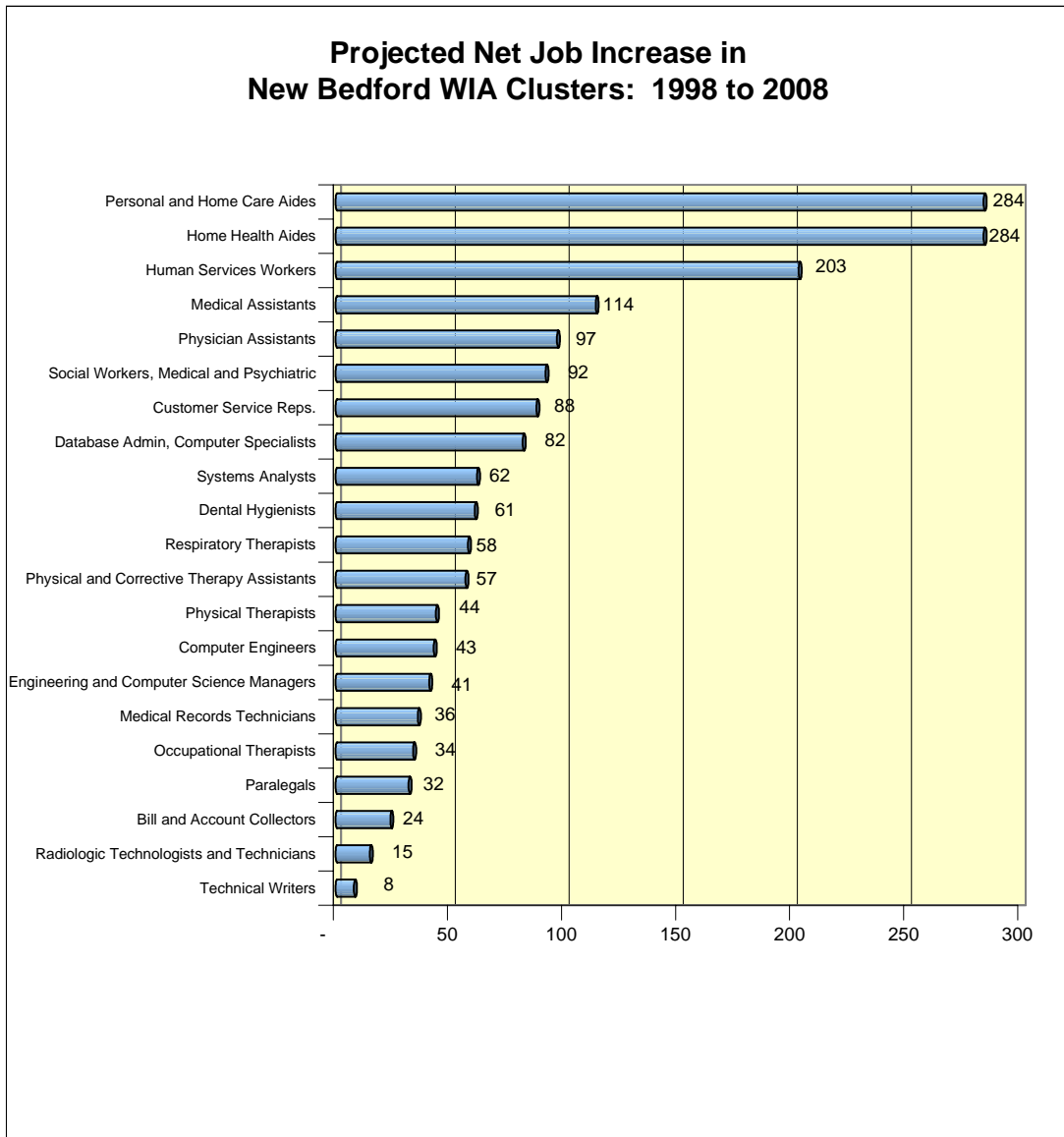


## **6.00 Occupational Analysis**

An occupational analysis was conducted to determine the projected net job increase of the fastest growing occupations in the Greater New Bedford Workforce Investment Area. These occupations were selected from the twenty-five fastest growing occupations identified in “Regional Reports: Profile of Projected Job Growth” (Massachusetts Division of Employment and Training, 1996). The twenty-one occupations selected include only those found in clusters that are critical and emerging or emerging. Thus, these occupations are not only projected to experience significant growth, they are also part of one or more industry groups projected to expand over the next ten years and thus remain critical to the economic vitality of the Greater New Bedford Workforce Investment Area.

The net job increase for each of the twenty-one occupations was calculated using occupational and industry matrices from the U.S. Bureau of Labor Statistics but applied to the Greater New Bedford Workforce Investment Area’s current occupational structure. Figure 19 on the following page shows the projected net job increase for the area’s fastest growing occupations. Importantly, the table shows the number of net new jobs created and does not include vacancies created by retirement, relocation, and other forms of job turnover.

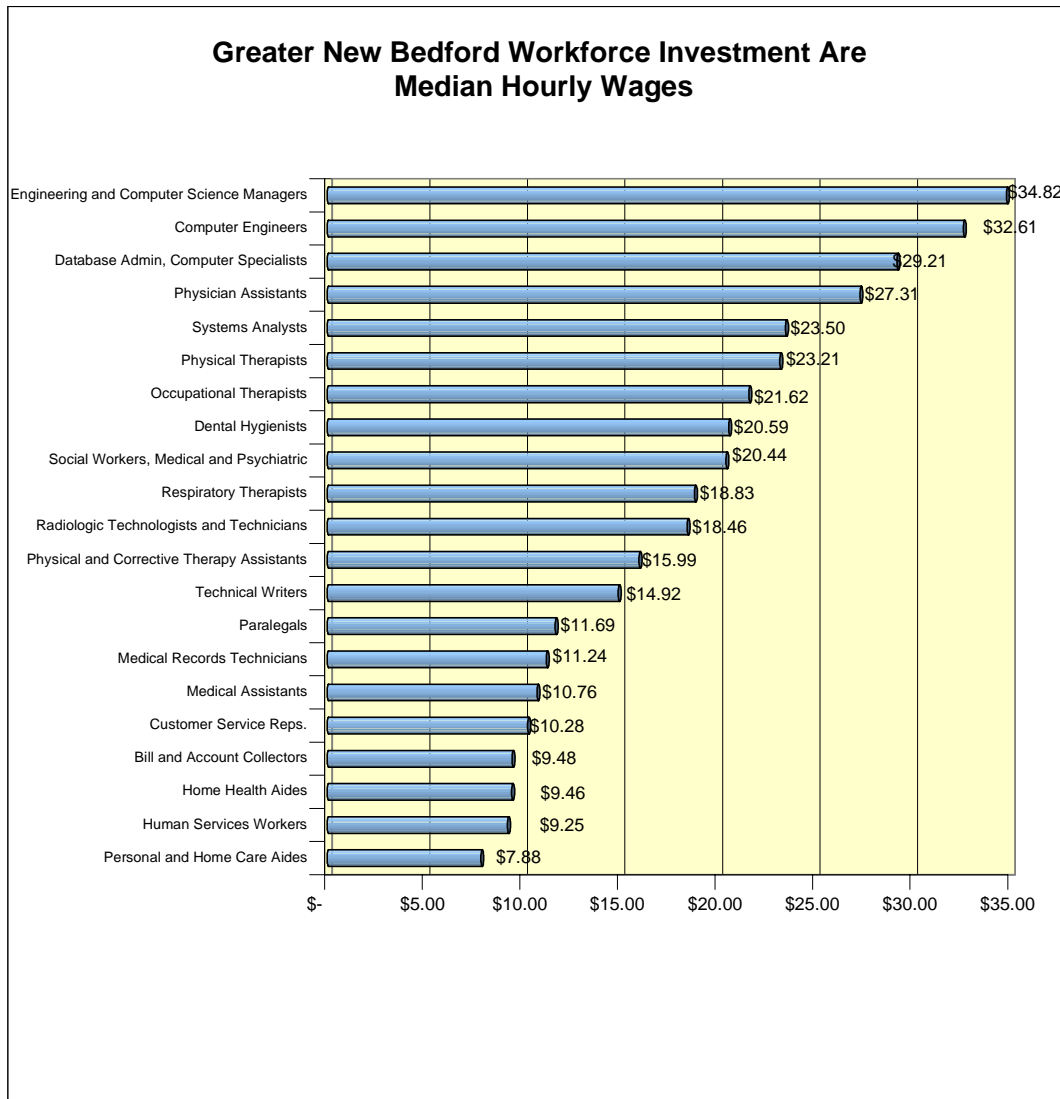
**Figure 19**



*Source: Massachusetts Division of Employment and Training; U.S. Bureau of Labor Statistics; and Center for Policy Analysis*

Figure 20 shows the median hourly wages for the occupations indicated in Figure 19. Wage data was obtained from the Massachusetts Division of Employment and Training. These are statewide averages (wage data for Southeastern Massachusetts was not available for all occupations). The wages range from a low of \$7.88 for Personal and Home Care Aides to \$34.82 for Engineering and Computer Science Managers.

**Figure 20**



Source: Massachusetts Division of Employment and Training, 1998

The table below shows the area's fastest growing occupations by the level of education required for entry into the occupation. Seven of the twenty-two occupations do not require a college degree. Six require an Associate's degree, while nine require a Bachelor's degree or higher.

### **Educational Requirements by Occupation**

#### **Short Term on the Job Training**

Bill and Account Collectors  
Customer Service Reps.  
Home Health Aides  
Personal and Home Care Aides

#### **Moderate Term on the Job Training**

Physical and Corrective Therapy Assistants  
Human Services Workers  
Medical Assistants

#### **Associate's Degree**

Medical Records Technicians  
Dental Hygienists  
Radiologic Technologists and Technicians  
Respiratory Therapists  
Paralegals  
Technical Writers

#### **Bachelor's Degree**

Computer Engineers  
Database Admin, Computer Specialists  
Engineering and Computer Science Managers  
Occupational Therapists  
Physical Therapists  
Physician Assistants  
Systems Analysts

#### **Master's Degree**

Social Workers, Medical and Psychiatric

*Source: Massachusetts Division of Employment and Training*

## **7.00 CONCLUSIONS AND RECOMMENDATIONS**

The Greater New Bedford Workforce Investment Area has made significant progress in closing a long-standing “unemployment gap” between the area and the rest of the state. The area’s average annual unemployment rate has fallen from 13.7 percent in 1991 to 3.5 percent in 2000. This progress is partly due to significant job growth in allied health services, business and professional services, high-tech manufacturing, and distribution. Since the end of World War II, unemployment in the Greater New Bedford Workforce Investment Area has typically been 50 percent higher than the statewide average at the peak of the business cycle and at least 100 percent higher than the statewide average at the trough of the business cycle. This ratio has flattened to 50 percent across the entire duration of the current business cycle (1991-present), while the state’s robust economy has brought the area’s unemployment rate down to a historically low level. The area is slowly developing a stronger employment base that is more diversified and less susceptible to the type of employment shock that hit the area from 1985 to 1991.

However, this progress is tempered by other trends that warrant significant concern about the long-term health of the area economy and the quality of the new jobs being created in the area. First, the decline in the area’s unemployment rate is largely a consequence of a shrinking labor force. The number of area residents who are employed has remained relatively constant during the last decade with 88,614 persons employed in 1990 and 88,552 employed in 2000. However, the area’s labor force has declined by more than 4,900 persons from 97,935 in 1990 to 93,007 in 2000 (BLS LAUS 1990-2000). In other words, even if no new jobs had been created during the last decade, the area’s unemployment rate would have fallen to 4.3 percent in 2000 simply due to labor force shrinkage. Thus, 9.4 percent of the 10.2 percent decline in area unemployment (1990 to 2000) is simply the statistical result of a shrinking labor force. This trend is particularly disturbing since the 2000 U.S. Census reveals that the area has experienced a large out-migration of 18 to 34 year olds, who are likely to have higher levels of educational attainment than the remaining population.

Furthermore, declining unemployment rates in the area have not resulted in rising wages. Instead, the sector and cluster analysis reveals that real wages declined in nearly every cluster and industry where employment is growing, while industries with rising real wages are experiencing employment declines. These two patterns – outmigration of educated youth and declining real wages in the remaining labor force – clearly indicate that the Greater New Bedford Workforce Investment Area is still confronting a structural skills gap.

On a national basis, the skills gap was first identified in 1987 by the Hudson Institute’s *Workforce 2000* report (Johnston and Packer 1987), which was

subsequently reaffirmed in projections by the U.S. Department of Labor, private foundations, and various think-thanks. By 1990, these sources all agreed that by the year 2000, nearly two-thirds of the new jobs being created in the United States would require some level of post-secondary education. Approximately one-third of the new jobs were expected to require at least a baccalaureate degree, while another one-third were expected to require a two-year associate's degree or certification by a technical-vocational institute (Silvestri and Lukasiewicz 1987; Mangum 1989; Commission on the Skills 1990).

With a statewide economy based on financial services, business and professional services, and high-tech manufacturing, Massachusetts has become the archetype of a post-industrial economy. Consistent with earlier projections, the 2000 U.S. Census reports that 35 percent of Massachusetts residents now have a bachelor's degree or higher (US Census 2000), while 80 percent have at least a high school diploma (US Census 1990). Formal educational attainment in the Greater New Bedford area remains far behind the state as a whole, while current high school drop-out rates do not bode well for the future. For example, the annual dropout rate in New Bedford in the 1998-1999 school year was 9.0 percent, compared to an annual dropout rate of 3.6 percent statewide.

The correlation between high incomes and formal education has been growing stronger during the last two decades (National Center for Education Statistics 1989, 98-99; Office of the President 1997). In 1980, the average college graduate earned approximately thirty percent (30%) more than a high school graduate. By 1993, the "wage premium" attached to a college degree had more than doubled with the average college graduate now earning seventy percent (70%) more than a high school graduate. Similarly, the average high school graduate earns seventy percent (70%) more than a person with a 9<sup>th</sup> grade education, which was the median educational attainment level of New Bedford residents in 1990 (U.S. *Statistical Abstract* 1999, 475).

Moreover, an extensive analysis of wage and income data by senior economists at the Federal Reserve Bank of New York concludes "that skill-biased technological change is probably the main contributor" to declining demand for unskilled labor in the United States and the rising demand for more skilled and educated workers (*Economic Report of the President, 1997*, p. 174). Factors such as increased international trade, the decline in union density, rising immigration, and declines in the real minimum wage were each found to account for 10 percent or less of the wage premium. The most important aspect of this skill-biased technological change has been the rapid integration of computing technology into virtually every workplace from highly complex computer-assisted-design and database management programs to simple word processing, inventory management, and accounts payable programs.

It is the Consultant's conclusion that the area's low levels of formal educational attainment require a long-term strategy that focuses on mitigating gaps in the bottom tiers of the area labor market. The skills gap in the Greater New Bedford Workforce Investment Area calls for a comprehensive multi-tiered strategy designed to move individuals up the educational and skills ladder in tangible and measurable increments (see Table 5).

**Table 5**

<b>Skill/Educational Level</b>	<b>Source of Training</b>
Graduate Degree	university
Baccalaureate Degree	college and university
Associate's Degree	community college
Craft Certification	technical institutes and others
Short-Term Certification	community college, university, other
G.E.D.	public schools, community college, non profit vendors
Basic Skills	public schools, community college, non-profit vendors

The Greater New Bedford Workforce Investment Area confronts a skills gap at every level of the educational and skills attainment ladder. However, the responsibility for closing the skills gap in many areas is properly the responsibility of the local public schools (K-12), community and state colleges, and the regional university, although the Workforce Investment Board may work with these agencies on targeted programming.

It is our recommendation that the Workforce Investment Board adopt the following principles in developing workforce training:

1. The Workforce Investment Board should target its limited funding on programs that develop basic skills and occupational competencies at the bottom of the educational attainment ladder. These programs should include, but not be limited to:

English as a Second Language (E.S.L.)  
Adult Basic Education (A.B.E.)  
Resume, Job Application, and Interview Skills  
Basic Keyboard and Computer Literacy Skills  
G.E.D.

2. The Workforce Investment Board should use its limited funding to leverage and coordinate additional funds, where possible, around the WIB's workforce development strategy. This strategy could include:
  - a. sponsoring and funding its own programs with a minimal charge to recipients,
  - b. seeking additional sources of funding from the Massachusetts Department of Education (A.B.E., G.E.D.), the Massachusetts Department of Transitional Assistance, and private foundations,
  - c. offering full or partial scholarships (individual training accounts) for short-term certification programs, especially those that leverage additional funds from existing vendors or providers such as the public schools, colleges, and universities, and local non-profit vendors,
  - d. temporary wage subsidies for transitional assistance recipients and the chronically unemployed while receiving employer-provided on-the-job training.
3. The Workforce Investment Board should target vocational and job training funds at short-term certification programs in occupations with high levels of new job growth and where average wages are at least 33 percent above the current minimum wage. The occupations that meet these criteria include:
  - a. customer service representatives
  - b. home health aides
  - c. personal and home care aides
  - d. bill and account collectors
4. The Workforce Investment Board should continue to strengthen the federal School-to-Career Initiatives by insuring that public school teachers and program coordinators receive appropriate training for their role in the area workforce development system.

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