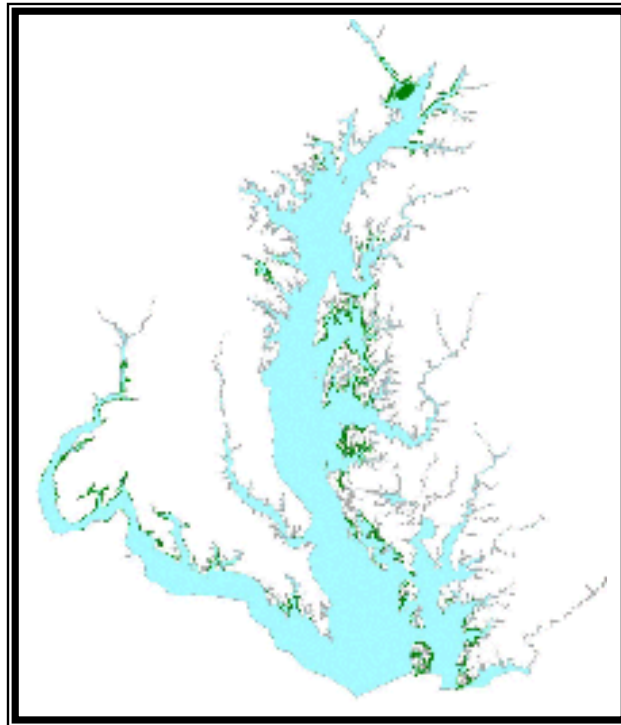


Workforce Challenges Impacting Businesses in the Chesapeake Region

An Industry Perspective



Prepared for



M A R Y L A N D

GOVERNOR'S WORKFORCE INVESTMENT BOARD

Prepared by

*Maryland Department of Labor, Licensing and Regulation
The Jacob France Institute, University of Baltimore*

December 2003

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EXECUTIVE SUMMARY

The Governor's Workforce Investment Board and the Chesapeake Workforce Alliance (consisting of the Susquehanna, Upper Shore, Lower Shore and Southern Maryland workforce investment areas) collaborated with stakeholders on a state-led-multi-area Community Audit designed to identify and analyze critical workforce needs and devise workforce strategies for the economies. The Audit focused on five industry clusters: Agriculture, Construction, Health Care, High Technology, and Tourism, which were selected by the Chesapeake Alliance. The methodology included a survey of businesses in the selected industries in the four areas, business visitations, focus groups in the four areas, as well as statewide focus groups for each of the industries. This project was made possible and funded by a two-year grant of \$149,000 issued by the Department of Labor, Employment and Training Administration (USDOL/ETA) in April 2001.

The Governor's Workforce Investment Board retained the Jacob France Institute of the University of Baltimore and the Office of Labor Market Analysis and Information of the Maryland Department of Labor, Licensing, and Regulation to collect and analyze key workforce development information for the five key industry clusters in each of the four workforce investment areas. The Jacob France Institute conducted the business visitation program and focus groups and served as prime contractor to integrate the findings of the research conducted into a final report. The Office of Labor Market Analysis and Information conducted and prepared a report on the survey and provided their insight and guidance on the various research steps conducted in the final report. One of the goals of the grant was to set the stage for the development of industry-based alliances that would then be able to work on strategies and tactics to directly address industry specific skill and workforce shortages. In Maryland in a time frame concurrent with the Community Audit grant a Coordinated Healthcare Initiative was launched. This initiative resulted in an Action Plan for Healthcare and an on-going steering committee to guide the implementation of the Action Plan recommendations.

This executive summary is divided into three sections:

- 1) A summary of the findings by workforce investment area;
- 2) A summary of the findings by industry cluster; and
- 3) A description of the Healthcare Summit that represents another tangible outcome for the Chesapeake Alliance grant.

Workforce Investment Area Summary

Overall, at least 40% of the responding firms within each region reported that they currently face workforce or labor market problems in their business, which limit their ability to achieve their business objectives. The major issue identified by employers to have the greatest impact on their business was basic skills and training, followed by worker retention. In addition, a majority of the interviewed firms responded that the major workforce problem that they face is a lack of workers. They also indicated that the existing workforce lacks sufficient life skills or work ethic. Moreover, firms within each region considered computer and business skills as being more important for the workforce to possess in the future.

Susquehanna Workforce Investment Area

- Forty percent (40%) of all survey responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems.
- Over half (54%) of the survey responses cited difficulty over the past year in filling job vacancies at varying levels of education/training.
- Sixty-nine percent (69%) of the firms interviewed responded that the major workforce problem that they face is a lack of workers for both skilled and unskilled workers.
- Eighty-three percent (83%) of the interviewed firms responded that they would be willing to work with other firms within their industry and 96% of firms interviewed would be willing to work with the Susquehanna Workforce Network to address workforce-related issues and problems.

Upper Shore Workforce Investment Area

- Fifty-six percent (56%) of all survey responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems.
- Nearly two-thirds (65%) of the survey responses cited difficulty over the past year in filling job vacancies. These vacancies were centered in the Tourism, Health Services, and Construction industry clusters.
- All of the firms interviewed responded that the major workforce problems they face are a lack of workers and high employee turnover.
- Eight-four percent (84%) of the firms interviewed responded that they would be willing to work with other firms within their industry and 84% of firms interviewed would be willing to work with the Upper Shore Workforce Investment Board to address workforce-related issues and problems.

Lower Shore Workforce Investment Area

- Forty percent (40%) of all survey responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems.
- Nearly half (49%) of the survey responses cited difficulty over the past year in filling job vacancies primarily from food service establishments and hotels.
- Eighty-four percent (84%) of the firms interviewed responded that the major workforce problems they face are a lack of workers, most importantly skilled workers, and high employee turnover.
- Eighty-four percent (84%) of the firms interviewed responded that they would be willing to work with other firms within their industry and 96% of firms interviewed would be willing to work with the Lower Shore Workforce Alliance to address workforce-related issues and problems.

Southern Maryland Workforce Investment Area

- Forty-seven percent (47%) of the responding companies to the survey cited that the main workforce problem they face is finding workers with specific occupational skills, followed by wage costs, and then finding workers with specific educational requirements.
- Forty-eight percent (48%) of all survey responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems.
- Fifty-seven percent (57%) of the survey responses cited difficulty over the past year in filling job vacancies. The positions indicated through the surveys that were difficult to fill were primarily computer-related positions.
- Thirty-six percent (36%) of employers, when surveyed, indicated that they were interested in partnering with other employers to develop skills alliances. In addition, 34% of respondents indicated that they were interested in participating in Southern Maryland WIA workgroups, committees, and task groups.

Industry Cluster Summary

In addition to the Workforce Investment Area analysis, key workforce issues in the industry clusters were also analyzed. Overall, employers cited that finding workers with the skills required for the job as the most important workforce issue facing their respective industries. Furthermore, the greatest issues firms face is in the area of “soft skills” and “life skills” of the workforce.

Agriculture

- The major issue identified by employers as having the most impact on their business was basic skills and training, followed by worker retention.
- Forty-eight percent (48%) of the survey responses cited difficulty over the past year in filling job vacancies at varying degrees of skill and experience. Forty-seven percent (47%) of the job vacancies identified by employers was centered in five occupations: veterinarians, farm/nursery laborers, veterinary assistants/laboratory animal caretakers, supervisors/managers of landscaping/lawn care workers, and light/delivery truck drivers.

Construction

- The major issue identified by employers as having the most impact on their business was worker retention, followed by basic skills and training.
- Fifty-eight percent (58%) of the survey responses cited difficulty over the past year in filling job vacancies for both skilled tradesmen such as carpenters, electricians, plumbers, HVAC mechanics/installers and for unskilled laborers.

Health Care

- The major issue identified by employers as having the most impact on their business was worker retention, followed by basic skills and training.

- Sixty-three percent (63%) of the survey responses cited difficulty over the past year in filling job vacancies at varying degrees of skill and experience. Forty-six percent (46%) of the unfilled demand identified by employers was centered in five occupations: registered nurses, nurses' aides, dental assistants, dental hygienists, and licensed practical nurses.

High Technology

- The major issue identified by employers as having the most impact on their business was technical skills development, followed by worker retention.
- Fifty-seven percent (57%) of the survey responses cited difficulty over the past year in filling job vacancies. When queried concerning their vacancies, the top five demand occupations, accounting for nearly 50% of the overall industry demand, involved computer-related tasks.

Tourism

- The major issue identified by employers to have the most impact on their business was basic skills and technical training, followed by worker retention.
- Fifty-one percent (51%) of the survey responses cited difficulty over the past year in filling job vacancies primarily for front-line workers – employees generally associated with keeping day-to-day operations running.

Recommendations

- Besides a need for workers, businesses have expressed that workers lack sufficient life skills or work ethic. The issues of work ethic and life skills can be addressed through the school systems where classes can be developed to teach and reinforce these skills. They can also be addressed through programs at the One-Stop Shops.
- In regions experiencing critical skills and worker shortages, businesses can work with the Workforce Investment Boards, and the Community Colleges to create or expand programs that will better prepare a local workforce and fill the needs of the business community.
- Strong interest has been expressed by businesses in working with other businesses within their region to form skills alliances and additionally to work with the local Workforce Investment Board to address the issue of worker shortages.

Coordinated Healthcare Initiative

The goal of the Healthcare Workforce Initiative is to create a sustainable approach, led and supported by private and public sector leaders to increase and expand the healthcare workforce in Maryland. An industry based Steering Committee is actively pursuing the implementation of initiatives in each of the action areas as is summarized below.

Attraction and Recruitment

- Increase the number and diversity of individuals choosing healthcare occupations.
- Expand education capacity to meet the needs of the healthcare workforce.

Retention

- Increase retention rates of Maryland's current healthcare workforce.

- Improve healthcare workplace environment.
- Increase healthcare worker satisfaction.

Professional Development

- Advance the skills and expertise of incumbent healthcare workers.
- Expand educational capacity to meet the needs of the labor force.
- Provide better access to healthcare skill opportunities.

State Policy and Finance

- Provide public policy and incentives to support the needs of the healthcare workforce.
- Demonstrate a public commitment to attracting, developing, and retaining the healthcare workforce.

Military Healthcare Workforce Transition

- Assist transitioning military healthcare personnel and their spouses in obtaining employment in Maryland's healthcare industry.

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1.0 Introduction

The Governor's Workforce Investment Board and the Chesapeake Workforce Alliance (consisting of the Susquehanna, Upper Shore, Lower Shore and Southern Maryland workforce investment areas) collaborated with stakeholders on a state-led-multi-area Community Audit designed to analyze and devise workforce strategies for five skill sectors of the economy through a business visitation outreach and data collection program in cooperation with partners and stakeholders. The Audit focused on five core industry clusters: Agriculture, Construction, Health Care, High Technology, and Tourism.

The core goals of the Audit were to:

- 1) Develop stronger board relationships and connections to businesses and identify effective ways to encourage active participation from their business members;
- 2) Survey businesses and identify critical occupational and skills needs in order to create research-based products to better inform local boards and professional staff about the labor market situation in their local area;
- 3) Conduct a skill analysis of selected occupations; and
- 4) Build momentum for Skills Alliances to ensure that businesses are able to grow and prosper and that employees are able to maximize their full career potential.

The Audit featured a business visitation program supplemented by focus groups and a direct mail survey to better connect with businesses and identify labor market needs; develop information on community career ladders; and determine business interest in participating in local Skill Alliances based on needs identified in the Audit. State level focus groups were conducted with key businesses in each of the five industry clusters in order to validate and extend the results of the research to the entire State of Maryland.

The Governor's Workforce Investment Board retained the Jacob France Institute of the University of Baltimore and the Office of Labor Market Analysis and Information of the Maryland Department of Labor, Licensing, and Regulation to collect and analyze key workforce development information for the five key industry clusters in each of the four workforce investment areas. The Jacob France Institute conducted the business visitation program and focus groups and served as prime contractor to integrate the findings of the research conducted into a final report. The Office of Labor Market Analysis and Information conducted and prepared a report on the mail survey and provided their insight and guidance on the various research steps conducted in the final report.

The results of the mail survey, business visitation interviews and focus groups are presented below. Separate independent analyses were prepared for each of the four workforce investment areas. A final chapter summarizes the results of the mail survey by industry cluster, describes the results of the five state level industry cluster focus groups, presents data on industry cluster level career ladders, and extends the analysis to the State of Maryland.

2.0 Susquehanna Workforce Investment Area

The Susquehanna WIA, with its convenient access to both rail and interstate transportation systems and its rich blend of urban/rural living space, has established itself as an attractive site for both business location and residential expansion. Catering to the needs of a growing business/residential population has strengthened the area's service economy, particularly the trade and services sectors. These two industries, when combined, account for about 6 out of every 10 jobs in the area's employment base. Nearly three-fourths of Susquehanna's job gains, according to future forecasts, will be tied to trade/services sector expansion.

In the Susquehanna Workforce Investment Area, business surveys, employer interviews, and regional focus groups were implemented.

- The issue of worker shortages, for both skilled and unskilled positions, was the major issue. Worker retention was a second major issue that firms identified.
- Worker shortages were most problematic for the health care sector. Eight of the ten health care firms interviewed identified worker shortages as their greatest workforce issue, most importantly the need for nurses, medical technicians, and pharmacists.
- As a result of the shortage of workers or the high rate of employee turnover, employers in the five industries studied are not able to grow or increase operations and face increased business costs in recruitment, retention, and wages.
- Firms in the focus groups, employer interviews, and surveys agreed for an increased need for assistance from the Susquehanna Workforce Network.

2.1 Susquehanna Business Survey

In conducting the Susquehanna WIA Workforce Survey, 656 firms were selected to participate in the survey. Based on the results, useable responses were received from 221 firms, yielding a response rate of 34%.

Surveyed employers in the Susquehanna WIA identified workers basic skills and training as having the greatest impact on their business. Worker retention and development of technical skills were also identified as having a significant impact on their business.

About 40% (88) of all responding firms indicated that the achievement of business objectives was being impeded by workforce or labor market problems. When asked to cite specific workforce problems, the three problems ranking the highest were finding workers with specific occupational skills (53%), wage costs (22%), and benefit costs (16%).

About 54% of the firms cited difficulty filling job vacancies over the past year with nearly 7 out of every 10 responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 22% indicated vacancies greatly hindered attainment of business goals. Employers, when asked to define their labor need, expressed demand for workers at varying levels of education/training. The position requiring the highest level of educational credentialing was that of registered nurse. Susquehanna employers, in their search, were looking for nurses with at least an AA degree to fill openings, which, in the Area, start at about \$19.82 per hour, with a median rate of \$27.59 per hour. A number of factors have worked in

concert to make it increasingly difficult for employers to fill nursing vacancies. The aging of the work force, managed care and other cost containment measures, and declining enrollment in nursing programs are just some of the detriments to recruitment.

Moving down the education/training ladder, employers identified carpenters and restaurant cooks as occupations characterized by unmet demand. In both of these positions, either long-term on-the-job training (12+ months) or combined work experience/formal training is the vehicle through which the skills for job performance can be attained. These positions, while requiring identical training levels, differ substantially in salary structure not only because of the precision required in skill levels but also because of the industries of hire. Carpentry skills, specifically installation and repairing skills are changeable based on project scales, requiring high levels of attention to precision/detail whereas monitoring/coordinating skills required of restaurant cooks, once learned, are applicable in almost every cooking situation. The median hourly rate for carpenters at \$19.63, an occupation routinely found in the construction industry where the average weekly wage is \$634.00, was more than double that of restaurant cooks who are most commonly employed in the leisure and hospitality industry where the weekly wage is just \$240.00.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Cooks, Restaurant	Equipment Selection Monitoring Coordination	Long-Term OTJ	\$7.54	\$9.51	\$9.00	\$10.50
Waiters and Waitresses	Service Orientation Active Listening Speaking	Short-Term OTJ	6.24	6.53	6.54	6.67
Carpenters	Installation Equipment Selection Repairing	Long-Term OTJ	12.20	20.87	19.63	25.19
Registered Nurses	Speaking Service Orientation Reading Comprehension	Assoc. Degree	19.82	26.19	27.59	29.38
Construction Laborers	Equipment Selection Operation and Control Mathematics	Moderate Term OTJ	8.60	10.51	10.51	11.47

The remaining jobs – construction laborer and waiters/waitress – for which employers were recruiting required lesser levels of experience/training. For construction laborers, moderate (1-12 months) on-the-job training was the qualifier for acceptable job performance while, for waiters/waitresses, on-the-job training up to one month was sufficient to effectuate skills development. Jobs proficiency standards and the complexity of job duties, determinants in pay scales, were higher for construction laborers. These factors, coupled with the difference in the overall wage in the construction industry as compared to the leisure and hospitality industry, help to explain the gap in wages between laborers and waiters/waitresses.

Employers in the area were proactive in their employee training efforts. Nearly 85% of all respondents indicated that their firm provided skills training to assist in employee advancement. The most commonly cited assistance offered was on-the-job training followed by in-house training, off-site training, tuition reimbursement, and travel expense reimbursement.

Nearly a third (72 responding firms) of employers, when polled, indicated that they were interested in partnering with other employers to develop skills alliances. For those employers favoring partnerships, providing expertise and space were the resources they were most willing to contribute. When asked about their willingness to participate in future workgroups, committees or task forces of the Susquehanna Workforce Network, 23.1% (51) of respondents indicated that they were interested in participating.

2.2 Susquehanna Business Interviews

The Jacob France Institute of the University of Baltimore with the assistance of the Susquehanna Workforce Network interviewed forty-eight firms in Harford and Cecil Counties. Businesses were interviewed in five sectors: agriculture, construction, high technology, health care, and tourism. The results of these interviews for all firms and for each sector are summarized below.

2.2.1 All Susquehanna Business Interviews

Overall, firms were aware of the Susquehanna Workforce Network and had a very favorable opinion of the organization. The major services that had been provided to businesses were job placement, recruitment, and grant writing.

Thirty-three of the forty-eight firms (69%) interviewed responded that the major workforce problem they face is a lack of workers, both skilled and unskilled. Additionally, firms indicated that the workforce does not possess sufficient life skills or work ethic. These problems caused firms to experience higher costs in terms of training, hiring, and/or overtime pay, and have caused firms to forego expansion and growth.

A majority of firms (thirty-five of the forty-eight, 73%) had experienced difficulty filling job openings over the past year. These openings were for both highly skilled and unskilled positions alike and while the lesser skilled positions were generally filled in a shorter period of time, skilled positions could remain unfilled for periods exceeding three months. No matter the type of position that was unfilled, the unfilled job opening affected the firm's ability to achieve its business goals.

The skills that firms viewed as being more important for their future were computer skills and business skills. Firms generally expected these skills to be somewhat hard to find in the future workforce and are worried that the region's workforce will not be prepared for the jobs that will exist in the future.

Overall, firms viewed the greatest problem affecting the region's workforce to be a lack of life skills and work ethic. Respondents thought that current employees do not have the necessary drive and dedication and are unable to manage their personal life in a way that affects their ability to work productively.

Recommendations

Suggestions that firms had to alleviate these workforce problems ranged from apprenticeship programs, to expansion of vocational programs, to greater linkages between businesses and the educational system, to providing life skills training, and providing training tax credits to businesses.

Eighty-three percent (83%) of the firms responded that they would be willing to work with other firms within their industry and 96% of firms interviewed would be willing to work with the Susquehanna Workforce Network to address workforce-related issues and problems.

Susquehanna Workforce Network - Summary of Interviews

	Agriculture	Construction	High Technology	Health Care	Tourism
Firms Interviewed	9	8	13	10	8
Firms Aware of SWA	6	7	13	6	6
Firms that use SWA	3	6	13	6	6
Firms Facing Workforce Problems	7	8	11	8	8
Issue	worker shortage	worker shortage	worker shortage	worker shortage	worker shortage
Issue	lack of life skills	lack of life skills	lack of life skills	lack of life skills	employee turnover
Issue	high wage costs	lack of work ethic			lack of public transit
Firms Experiencing Hiring Difficulty	4	7	10	7	7
Occupation	general labor	welders	engineers	nurse	chef
Occupation	sales	electricians	mechanics	medical tech	housekeeper
Occupation	managerial	master craftsmen	machinists	pharmacist	cashier
Occupation		unskilled workers	electricians	admin support	wait staff
Occupation		managerial	unskilled workers		groundskeeper
Firms Willing to Partner in Industry	7	6	11	8	8
Firms Willing to Partner with SWA	9	7	12	10	8

2.2.2 Agriculture

Of the nine agricultural companies that participated in the employer interviews, two-thirds had heard of the Susquehanna Workforce Network and one-third had used their products or services in the past. The most frequent services used were job postings, job recruitment and job placement. Firms that had used these services responded that they were satisfied with the Susquehanna Workforce Network.

Seven of the nine agriculture firms said that they currently face labor market problems. These problems include worker shortages, lack of skilled labor, lack of life skills in employees, and high wage costs. The impact of these labor market problems ranged greatly from not being able to afford the high wages that workers request leading to worker shortages, to having current employees work longer hours leading to overtime and increased costs, to not being able to grow or develop their business, to experiencing higher training costs because of a high level of turnover.

Of the nine agriculture firms, four expressed difficulty filling job vacancies over the past year. The occupations in which they experienced difficulty were general labor, sales, and managerial positions. Unfilled job openings somewhat hindered their ability to meet their business goals, and general labor positions took from under a month to over three months to fill. Sales positions were normally filled in a period of one to three months and managerial positions took over three months to fill a vacancy. A majority of the positions that firms mentioned difficulty in filling were entry-level positions that used in house training. The managerial positions required a degree in business or horticulture. Businesses recruit these positions locally through the newspapers or by word of mouth.

Agriculture firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and somewhat difficult to find, basic math skills were very important and somewhat difficult to find, while verbal communication skills are very important and somewhat hard to find and written communication skills are somewhat important and somewhat hard to find. Basic computer skills are viewed as being somewhat important and somewhat difficult to find in workers.

Firms were also asked to describe the importance that they place on educational levels and the difficulty they have in finding workers with key education levels. Agriculture firms viewed a high school degree as somewhat important and not difficult to find, vocational degrees as somewhat important and either very hard to find or not at all hard to find, and associate degrees and above as not generally important to their business for the positions in which they were seeking workers.

Some of the major occupational skills that agriculture firms required in their employees were mechanical/vocational skills, animal care skills, interpersonal skills, physical labor, and business skills. These were all viewed as being very important and somewhat hard to find in employees. Future skill needs include increased business, customer services, computer, and language skills. These skills will become more important because the agriculture industry is becoming more computerized and will be more closely tied to the tourism industry. Firms foresee difficulty in finding these skills in the future workforce because firms are currently unable to pay the salaries that workers demand, and in a rural area the labor pool is not sufficient for their needs. Additionally, with the shortage of local labor, firms are relying on immigrant labor, primarily Spanish speaking workers. Firms do not believe that the skills, such as interpersonal skills and business skills, which they see as being needed for the future, are being taught in the schools.

Agriculture firms also feel that there is a lack of life skills and work ethic among today's workforce and that it is difficult to find workers that are willing to work labor-intensive jobs.

Recommendations

There are some steps that the firms felt the State or local government can take to help reduce these labor market problems. These steps include providing more support to the vocational and agriculture programs, providing life skills training, teaching work habits in the local school systems, providing State aid for skills training, reducing workplace regulations, and providing worker subsidies.

Firms also said that the Susquehanna Workforce Network should consider providing life skills training, marketing skills training, provide assistance to small and family run businesses,

work more closely with high school students, and create apprenticeship or work study programs in the high schools or in the vocational schools.

Seven of the nine firms, responded that they would be willing to partner in their industry to help develop strategies to improve workforce needs. All of the firms that participated in the interviews were willing to work with the Susquehanna Workforce Network in the future.

2.2.3 Construction

Of the eight construction companies that participated in the employer interviews, seven had heard of the Susquehanna Workforce Network and six had used their products or services in the past. The most frequent services used were job postings, recruitment, placement, and grant writing. Firms that had used these services responded that they were very satisfied with the Susquehanna Workforce Network.

All of the construction firms said that they currently face labor market problems. These problems include worker shortages, lack of skilled labor, and both a lack of life skills as well as a work ethic in employees. The impact of these labor market problems ranged from not being able to develop and grow their business, to work not being completed on schedule, to experiencing greater costs for training due to having to constantly hire workers.

Seven of the eight construction firms reported difficulty filling job openings over the past year. The occupations in which they experienced difficulty were skilled positions (such as welders, electricians, and master craftsmen), unskilled labor, managerial (foreman and project manager), and sales positions. The extent that these job openings hindered their ability to meet their business goals ranged from somewhat to greatly. The length of the job vacancies ranged from one to three months to over three months to fill positions. Career ladders exist for skilled workers or managerial positions, but did not exist for entry-level positions. In order to be promoted into those managerial positions, additional training is required. Businesses used a combination of in-house and outside training in order to promote existing workers. Firms recruited locally and regionally using word of mouth and local newspapers. For skilled positions, firms primarily recruited from educational institutions.

Construction firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and not difficult to find, basic math skills were very important and somewhat difficult to find, while verbal communication skills are very important and very hard to find and written communication skills were somewhat important and somewhat hard to find. Basic computer skills are viewed as being not important and somewhat hard to find in workers.

Firms were also asked to describe the importance they place on finding workers who have completed various educational levels and the difficulty they have in finding workers with those education levels. Construction firms viewed a high school degree as not important and not difficult to find, vocational degrees as somewhat important and somewhat hard to find, and associate degrees and above as not important to their business for those positions in which they were seeking employees.

Some of the major occupational skills that construction firms required in their employees were technical/vocational skills (electrical/mechanical), computer skills (drafting), and business skills. These were all viewed as being very important and somewhat to very hard to find in employees. Firms foresee a need for increased business skills and increased computer skills. These skills will become more important as the construction industry becomes more computerized and employees will not only have to design and build the products but have to interact more closely with the clients and suppliers. Firms expect to experience difficulty in finding these skills in the future workforce because the current workforce is not very computer savvy and does not have a great degree of exposure in dealing with clients and using business skills.

Construction firms responded that the region needs to be able to retain the current and future workforce and that there are not enough opportunities for persons in the region within the construction industry. Additionally, there is a need for better vocational training in the educational system and the emerging workforce possesses a poor work ethic and lacks motivation.

Recommendations

Businesses felt that there are some steps the State or local government can take to help reduce these labor market problems. These steps include providing employee drug testing, developing more vocational programs, providing job training and life skills training, and working with the schools to develop internships and exchange programs with businesses.

Firms also said that the Susquehanna Workforce Network should work to upgrade the computer skills of the existing workforce, help establish training programs and internships in the high schools and vocational schools, and provide life skills training and interpersonal skills training.

Six of the eight firms said they would be willing to partner in their industry to help develop strategies to improve workforce needs. Seven of the eight construction firms that participated in the interviews were willing to work with the Susquehanna Workforce Network in the future.

2.2.4 High Technology

All thirteen of the high technology businesses interviewed responded that they were aware of the Susquehanna Workforce Network and all of them had used their products or services in the past. The primary services that they had used included assistance with grant writing, job recruitment/placement, and business certification. These firms expressed a high level of satisfaction with the Susquehanna Workforce Network, commenting that it was a great resource, that the staff was always willing to help, and that it is well structured and run.

Eleven of the thirteen high technology firms responded that they face labor market problems that limit the ability of their firm to reach its business objectives. There were two major problems that they experienced, worker shortages (both skilled and unskilled workers) and a lack of life skills. The impact of these two problems are: they incur high costs associated with training; they find themselves having to pay to relocate workers from outside of the local area; they are kept from bidding contracts; and they can not expand their operations.

Ten of the thirteen firms said that they had experienced difficulty filling job openings over the past year. The types of positions that were difficult to fill included unskilled labor and skilled labor positions (especially engineers, mechanics, machinists, and electricians). These positions generally took a period of from one to three months to over three months to fill. Firms said that the difficulty they experienced in filling these positions somewhat hindered their ability to achieve their business goals. Skilled labor positions had existing career ladders and positions from which someone could be promoted or advanced. These promotions would require additional skills training from a community college, vocational school, or outside training programs. Firms recruited their employees from a wide geographic range from locally (for unskilled positions) to nationally (for specialized skilled positions) and they use a variety of recruitment methods from job fairs to newspaper ads, to recruiting through customers, educational institutions, and the Internet.

High technology firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and somewhat difficult to find, basic math skills were very important and somewhat difficult to find. Verbal communication skills are very important and not hard to find and written communication skills are somewhat important and somewhat hard to find. Basic computer skills are viewed as very important and somewhat hard to find in workers.

Firms were also asked to describe the importance that they place on educational levels and the difficulty they have in finding workers with those education levels. High technology firms viewed a high school degree as very important and not difficult to find, vocational degrees as very important and very hard to somewhat hard to find, and associate degrees and above as not important to their business for those positions in which they currently faced job vacancies.

The major occupational skills that high technology firms required were computer, mechanical, vocational, interpersonal, and business skills. All of these were viewed as being very important and somewhat hard to find in employees. Skills that firms feel will be more important in the future include increased computer skills and business skills (especially marketing and management skills). These skills will be needed to promote firm growth and the production machinery and tools that will be used are becoming more computerized. Firms expect it to be difficult to find the skills they will require in their workers because costs associated with certifying workers in the needed skills are high and that there is not a sufficient local labor supply.

High technology firms commented that the local workforce is lacking in work ethic, life skills, and technical skills. Additionally, there is a lack of interest in high technology occupations.

Recommendations

Firms had several ideas as to how the State or local government can address these labor market problems. Their suggestions included starting training programs in the schools, expanding vocational programs, focusing more on math and science in the schools, creating apprenticeship programs or worker training programs for adults, and working to change the view of blue collar occupations.

The interviewed firms also commented that the Susquehanna Workforce Network should consider providing life skills training, helping firms locate tax credits, and getting more businesses involved in resolving workforce issues.

Eleven of the thirteen firms responded that they would be willing to partner in their industry to help resolve workforce issues. Twelve of the firms responded that they would be willing to work with the Susquehanna Workforce Network in the future.

2.2.5 Health Care

Of the health care sector firms that were interviewed, eight of the ten were aware of the Susquehanna Workforce Network and six of them had used their products or services. The types of services that they used were job placement, grant writing assistance, and training classes. Firms indicated that they were satisfied with the assistance that they received from the Susquehanna Workforce Network.

Eight of the ten health care firms indicated they experience labor market problems and worker shortages, with the main problem in nursing and other certified staff positions. The lack of workers forces firms to pay increased overtime-pay costs, and use employment agencies.

Seven of the ten firms experienced difficulty filling job vacancies over the past year - in nursing, medical technology, administrative support, and pharmacy. Nearly all of the firms indicated that it took well over three months to fill vacancies greatly affecting their ability to meet their goals. All of the positions for which firms had trouble filling were positions in which there existed a career ladder and had positions from which someone could be promoted or transferred into. In order to be promoted or transferred, additional schooling or certification would be required. The geographic scope of their search for employees ranged from the local area to nationally in certain occupations. Firms used job fairs, newspapers, radio advertising, and the Internet as their primary means to recruit employees.

Firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. All of the basic skills were viewed as being very important to health care firms (reading, math, verbal and written communication, and computer skills) and are all viewed as being somewhat difficult to find in employees.

They were also asked to describe the importance they place on educational levels and the difficulty they have in finding workers with those education levels. Firms viewed a high school degree to advanced and professional degrees as being very important and either very hard to find or somewhat hard to find in workers.

The major occupational skills which firms required in their workers but were hard to find were interpersonal, communication, computer, and medical skills. Computer skills were also becoming more important because the industry is becoming more computerized from its business operations to the medical technology that is used. Firms are not sure whether the computer skills that they will require will be difficult to find because new employees are more familiar with computers and have greater exposure to them while existing workers will need to learn how to use the technology.

Health care firms also had very specific comments about workforce issues in the Susquehanna region. They feel that the issue of transportation and day care is severely affecting the ability of persons to enter the workforce as well as businesses having a stable

workforce. In addition, there is a lack of skilled workers, and a need for certified personnel to teach medical related programs (especially in nursing).

Recommendations

Firms felt that the State and local governments could help alleviate the workforce problem by increasing funding for medical training programs, providing tuition support or additional scholarships for health related degrees, increasing enrollment in the nursing program, and allowing health care facilities to offer certifications as part of their jobs.

Firms also feel that the Susquehanna Workforce Network should consider classes in work ethics, interpersonal skills and computer training. The Susquehanna Workforce Network should also hold job fairs and help provide medical training certification.

Eight of the ten firms are willing to partner with other health care firms to address workforce issues. All of the health care firms that were interviewed were willing to work with the Susquehanna Workforce Network in the future to address workforce needs.

2.2.6 Tourism

Of the eight tourism firms that were interviewed, seven were aware of the Susquehanna Workforce Network. Six of the firms had used the services of the Susquehanna Workforce Network in the past, mostly for job posting, recruitment and for job fairs. Tourism firms had a highly favorable view of the Susquehanna Workforce Network, indicating that the Network saves time and work.

All of the tourism sector firms said they face labor market problems. The types of problems are labor shortages, high employee turnover, and a lack of public transportation. As a result, firms have lost business, have to constantly train workers, which leads to higher costs, and have a high staff turnover.

Seven of the eight tourism sector firms interviewed said they have experienced difficulty filling job vacancies over the past year. The types of positions that were difficult to fill included skilled positions such as chef, but mostly unskilled positions such as housekeeping, wait staff, cashiers, dishwashers, and groundskeepers. The length that these positions took to fill ranged greatly with the unskilled positions taking from under one month to one to three months while skilled positions took from one to three months to sometimes over three months. The firms responded that the difficulty they faced in filling these openings somewhat affected their ability to meet their business goals. The positions that firms needed to fill were predominately entry-level but have the ability for workers to move upward. Employers used on the job training in order to promote persons into the positions for which they experienced difficulty in filling and recruited their employees from the local area. Firms mostly advertised unfilled positions locally in newspapers, radio, their own websites, and at the community colleges.

Tourism sector firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and not difficult to find, basic math skills were somewhat important and not difficult to find, while verbal communication skills are very important and somewhat hard to find and written communication skills are somewhat important and

somewhat hard to find. Basic computer skills are viewed as being somewhat important and somewhat hard to find in workers.

Firms were also asked to describe the importance that they place on finding workers with certain educational levels and the difficulty they have in finding workers with those education levels. Tourism sector firms viewed a high school degree as somewhat important and not difficult to find, vocational degrees as not important but somewhat hard to find, and associate degrees and above as not important to their business for those positions in which they experience difficulty in hiring.

Some of the major occupational skills that firms required include customer service, interpersonal, business, and culinary skills. These are all viewed as being very important and somewhat hard to find in employees. Computer skills are viewed as the most important skill that the future tourism workforce must possess. The reason is that the tourism industry is already starting to integrate computers into every aspect of the tourism industry. Firms are unsure if workers will possess these skills due to the fact that the positions to be filled are low-wage, entry-level positions in which persons might not have the exposure to computers.

General comments on the Susquehanna workforce were that besides a shortage of workers, there is a lack of public transportation, a lack of work ethic in employees, and a high incidence of drug and alcohol abuse.

Recommendations

Steps that firms see that the State or local government can take to alleviate these problems are to improve basic life skills training in the school systems, create placement services within the schools, create a culinary program in the vocational schools, and expand the public transportation system.

Firms believed that the Susquehanna Workforce Network should create a placement service in the community college and vocational schools, work on enhancing basic and life skills, help job applicants network, and teach job application skills.

All eight of the tourism sector firms that were interviewed were willing to partner in their industry to address workforce problems. All of the firms responded that they would be willing to work with the Susquehanna Workforce Network in the future to address workforce issues.

2.3 Susquehanna Focus Groups

Two focus groups were conducted with businesses from the Susquehanna Workforce Investment Area, the first on October 29, 2002 and the second on November 29, 2002. Five businesses attended the first focus group and six businesses attended the second. The goals for the focus groups were to: a) present and validate the results of the survey and interviews; and b) identify and address any gaps in the analysis conducted. In the focus groups the results of the survey and interviews were presented followed by a summary of the major findings of the research in the following areas:

- Key workforce issues;
- The impact of workforce shortages on businesses;
- Workforce skills issues;

- Other issues; and
- Policy options.

In the focus groups, business participants were asked to respond to the findings of the survey and interviews from their perspective, participate in a facilitated dialogue on the key workforce issues and policies identified, and provide their input about the effectiveness of the local workforce development system. In general, there was a strong level of agreement with the results of the survey and interviews.

Both focus groups agreed that the most important workforce issue in the Susquehanna area is the difficulty businesses face finding skilled workers. However, many businesses expressed the view that with the current economic slowdown, finding workers has become less difficult. Hard to find workers included, health care workers, skilled trades, and transportation workers. There was also a general consensus that local employers faced difficulty in drawing workers from the region's substantial base of out-commuters to Baltimore, Philadelphia, and Wilmington.

Both focus groups agreed that worker shortages were impacting their businesses. Impacts ranged from the need to spend more on training and overtime, to increased recruitment costs, to problems with meeting deadlines. The focus group believes that tight labor market conditions are increasing employee turnover, both from businesses "poaching" employees from competitors (especially among high technology firms) to employees changing jobs for small wage increases. High employee turnover is also causing businesses to spend more on recruitment and training and in some cases impacting productivity or quality.

A key finding of the focus groups and interviews was that one of the most important workforce skills issues is the lack of "life" or "soft" skills among the region's workforce. This was true across all sectors in the interviews and focus groups. Businesses were generally satisfied with the basic skills of the local workforce. Math skills were identified as areas where businesses would like to see improvement, but soft skills – such as attendance, communications (verbal and written), and customer service – were identified as the key skills related issue. There was general agreement that the regional school systems are doing as much as they can and this is a problem that parents need to address. Computer skills were the skill set seen as most important for the future, but there was general agreement that these skills are getting easier to find in workers as more people are exposed to and use computers in school and at home.

In addition to worker shortages and skills, access to transportation and childcare (and in the future eldercare) were seen as critical barriers to employment, especially among lower skilled workers. In the focus groups, businesses identified the need for employers to continue to be work with the school system as critical for the future. Businesses also identified increasing the Susquehanna Workforce Networks outreach to and work with small businesses as important.

3.0 Upper Shore Workforce Investment Area

Throughout the Upper Shore Area, an abundance of natural resources provides a source of business as well as recreational opportunities for both residents and tourists alike. The Area, while managing to maintain its scenic charm, has enhanced its infrastructure to accommodate and to encourage both business and residential growth. Within the Upper Shore WIA, the trade and services industries are not only the largest but among the most rapidly expanding industries in the area. About 6 out of every 10 jobs in the area's economic base are derived from these two industries. Future forecasts suggest substantial growth in both services and trade employment, further enhancing the strength of these two industries as area job providers.

In the Upper Shore Workforce Investment Area, business surveys, employer interviews, and regional focus group were implemented.

- Worker shortages in both skilled and unskilled positions and high employee turnover are the major problems that businesses face.
- These workforce problems make it difficult for employers to achieve their business objectives and lead to lost sales, increased training and overtime costs, and reduced opportunities for expansion.
- In the tourism sector, a major employment industry in the Upper Shore, seven of the eight tourism firms interviewed had unfilled job openings for both skilled (chef) and unskilled positions (groundskeeper).

3.1 Upper Shore Business Survey

In conducting the Upper Shore WIA Workforce Survey, 453 firms were selected to participate in the survey. Based on the results, useable responses were received from 168 firms, yielding a response rate of 37%.

Employers identified worker basic skills and training, retention of skilled workers, and technical skills development as having the greatest impact on their business.

About 56% (94) of all responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems. When asked to cite specific problems, the three greatest problems were finding workers with specific occupational skills, wage costs and benefit costs.

Nearly two-thirds (109) of the responses cited difficulty in filling job vacancies over the past year; about 6 out of every 10 responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 27.5% indicated it affected them greatly.

According to survey results, the top five occupations for which respondents cited vacancies were centered in the Tourism, Health Services and Construction industry clusters. Within tourism, demand from employers in food service establishments reflected the difficulty in filling vacancies existing for waiters/waitresses and for restaurant cooks. Waiters/waitresses are normally required to bring minimal skill levels to the table; however, job readiness skills such as service orientation, communication, and listening ability are of particular importance. Occupational mobility is relatively limited for waiters/waitresses, and wages tend to be on the lower end of the scale, explaining why many of the workers often drawn to this occupation are students or homemakers looking to supplement family income through part-time employment.

Restaurant cooks, a food service occupation with a higher degree of work responsibility, represented another occupation in which employers were recruiting. Familiarity with kitchen tools/equipment and the ability to monitor and coordinate simultaneous food preparation activities -- skills that can be acquired either through long-term on-the-job training or through prior work experience are essential in this occupation. Restaurant cooks could expect to earn a median wage of about \$7.94 per hour, with the potential for earnings rising to \$9.25 per hour with gained experience.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Waiters and Waitresses	Service Orientation Active Listening Speaking	Short-Term OTJ	\$6.20	\$7.32	\$6.70	\$7.87
Registered Nurses	Speaking Service Orientation Reading Comprehension	Assoc. Degree	19.98	25.74	26.66	28.63
Carpenters	Installation Equipment Selection Repairing	Long-Term OTJ	13.27	16.13	15.69	17.56
Cooks, Restaurant	Equipment Selection Monitoring Coordination	Long-Term OTJ	6.29	8.27	7.94	9.25
Construction Laborers	Equipment Selection Operation and Control Mathematics	Moderate Term OTJ	8.62	10.10	9.99	10.85

Growth in the residential market and economic revitalization activities in the Upper Shore have spurred demand in the construction industry for both skilled craftsmen, such as carpenters, and unskilled laborers. While both of these occupations require familiarity with the tools of the trade, carpentry skills are finer tuned, involving both installation and repair as opposed to those of laborers where skills are more generic. The difference in both skill levels and training required in these occupations explains the wage differential; for carpenters, the median wage in the area is \$15.69 per hour, about 57% higher than that of \$9.99 per hour for laborers.

Current demand also exists for registered nurses, an occupation requiring at least an AA degree. Since one of the primary responsibilities of a registered nurse is to provide and document patient care, a task that involves interacting with others in the health care hierarchy and interpreting physician directives, employers emphasized the need for service-oriented individuals with good communication and reading comprehension skills. Prospective employers could expect to offer selected candidates a median wage of \$26.66 per hour – the going rate for registered nurses in the area.

Employers in the area were very proactive in their employee training efforts. About 85% of all respondents indicated that their firm provided skills training to assist in employee advancement. The most commonly cited assistance offered was on-the-job training, and in-house training.

About 36% (61) of employers, when polled, indicated that they were interested in partnering with other employers to develop skills alliances. For those employers favoring partnerships, providing expertise and space were the resources they were most willing to contribute. When asked about their willingness to participate in future workgroups, committees or task forces of the Upper Shore WIA, 24% (41) of respondents indicated that they were interested in participating.

3.2 Upper Shore Business Interviews

The Jacob France Institute of the University of Baltimore, with the assistance of the Upper Shore Workforce Investment Board, interviewed twenty-five firms in Talbot, Kent, Queen Anne's, and Caroline Counties. Businesses were interviewed in five sectors: agriculture, construction, high technology, health care, and tourism. The results of these interviews for all firms and for each sector are summarized below.

3.2.1 All Upper Shore Business Interviews

Overall, firms were aware of the Upper Shore Workforce Investment Board. Although nearly all of the firms interviewed knew of the Upper Shore Workforce Investment Board, just over half have used the products or services of the Workforce Investment Board. The thirteen firms that reported using the Upper Shore Workforce Investment Board used employee hiring and training, displaced worker assistance, and training programs. Firms using the Upper Shore Workforce Investment Board responded that they were satisfied with their assistance but felt that the Board needed to be more visible and better market itself.

All twenty-five firms (100%) interviewed responded that the major workforce problems they face are a lack of workers and high employee turnover. These problems caused firms to experience higher costs in terms of training, hiring, and/or overtime pay. In addition, firms have had to forego expansion and growth, and in health care firms have led to a reduction in services provided.

A majority of firms (88%) had experienced difficulty filling job openings over the past year. These openings were for both highly skilled and unskilled positions and while the lesser skilled positions were generally filled in a shorter period of time, skilled positions could remain unfilled for periods exceeding three months. No matter the type of position, unfilled job openings affect the firm's ability to achieve its business goals.

The skills that firms viewed as being more important to their future were computer and business skills. Firms generally expect business skills to be somewhat hard to find in the future workforce since they are not being addressed in the educational system, but are unsure whether the computer skills that workers will possess are sufficient for their needs.

Overall, firms viewed the greatest problem affecting the region's workforce to be a lack of life skills and work ethic. Respondents thought that current employees do not have the

necessary drive and dedication and are unable to balance their personal life and their ability to work productively. Additional problems affecting the regions workforce cited by employers is the lack of an effective transit system and the need to attract new firms and workers to the Eastern Shore.

Recommendations

Firms suggested that the State could alleviate these workforce problems through apprenticeship and internship programs, expansion of vocational and community college programs, incentives for people to exit welfare assistance programs, and improving the transit system on the Eastern Shore.

Twenty-one of the twenty-five firms (84%) responded that they would be willing to work with other firms within their industry and 84% of firms (21 of the 25) interviewed would be willing to work with the Upper Shore Workforce Investment Board to address workforce-related issues and problems.

Upper Shore Workforce Network - Summary of Interviews

	Agriculture	Construction	High Technology	Health Care	Tourism
Firms Interviewed	3	4	7	8	3
Firms Aware of USWA	2	3	7	7	3
Firms that use USWA	2	1	5	4	1
Firms Facing Workforce Problems	3	4	7	8	3
Issue	worker shortage	lack of skilled workers	worker shortage	worker shortage	worker shortage
Issue		turnover	turnover	turnover	turnover
Issue				lackof transit	
Firms Experiencing Hiring Difficulty	2	3	6	8	3
Occupation	laborer	carpenter	machinist	nurse	maintainence
Occupation	machine operator	project engineer	mechanic	social worker	public relations
Occupation			electrician	pharmacist	administrative
Occupation			data technician	dental hygenist	
Occupation			truck driver	medical coding	
Firms Willing to Partner in Industry	2	3	6	7	3
Firms Willing to Partner with USWA	2	3	6	7	3

3.2.2 Agriculture

Two of the three agricultural companies that participated in the employer interviews had heard of the Upper Shore Workforce Investment Board and both had used their products or services. Both firms had used the Upper Shore Workforce Investment Board for job postings.

All of the agriculture firms interviewed reported that they currently face labor market problems. The problem cited was a shortage of workers. The impact of workers shortages were lost sales and higher costs due to reductions in efficiency.

Two of the three agricultural firms reported difficulty filling job openings over the past year. The occupations in which they experienced difficulty were machine operators and basic laborers. These unfilled job openings somewhat hindered their ability to meet their business

goals and took over three months to fill. Both positions were entry-level occupations and were recruited locally using newspapers, the radio, and the Maryland job service.

Agriculture firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being somewhat important and not difficult to find, basic math skills were somewhat important and somewhat difficult to find, while verbal communication skills were very important and somewhat hard to find. Written communication skills are somewhat important and somewhat hard to find and basic computer skills are viewed as not being important and not difficult to find in workers.

Firms were also asked to describe the importance that they place on worker educational levels and the difficulty they have in finding workers with key education levels. Agriculture firms viewed a high school degree as somewhat important and somewhat difficult to find, vocational degrees as somewhat important and very hard to find, and associate degrees and above as not generally important to their business for the positions in which they were seeking workers.

Some of the major occupational skills that agriculture firms required in their employees were mechanical/vocational skills, communication skills, and physical labor skills. These were viewed as being very important and somewhat hard to find in employees.

The agriculture firms responded that they feel there is a general lack of life skills and workers are not reliable.

Recommendations

The firms said that the State or local government can help reduce these labor market problems by creating new training programs, making additional grants available, and reducing the assistance provided to persons receiving welfare.

Two of the three agriculture firms are willing to partner with other firms in their industry and are willing to partner with the Upper Shore Workforce Investment Board in the future. Additionally, they believe that the Upper Shore Workforce Investment Board should focus on teaching basic skills to workers and teaching work ethic in the schools.

3.2.3 Construction

Three of the four construction firms that participated in the employer interviews had heard of the Upper Shore Workforce Investment Board, but only one had used its products or services in the past. The firm that used the Upper Shore Workforce Investment Board used it for marketing and job placement. All of the firms indicated that the Upper Shore Workforce Investment Board needs to market itself more effectively and become more visible.

All of the construction firms reported they currently face labor market problems. Their greatest problems were a shortage of skilled workers and high employee turnover. As a result, employers had to continually hire new workers, the ability to grow their firm is limited, and they are forced to pay for employees commuting to/from work.

Three of the four interviewed firms reported difficulty filling job openings over the past year. The occupations in which they experienced difficulty were skilled positions (carpenter and project engineers). These job openings greatly hindered their ability to meet their business

goals. The length of the job vacancies was over three months. Career ladders exist for both of the positions mentioned by the interviewed firms. In order to be promoted into these positions, additional training is required. A combination of in-house and outside training is used in order to promote existing workers. Firms recruited locally and regionally to fill open positions.

Construction firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. All of the basic skills (reading, math, verbal communication, written communication and computer skills) were viewed as being very important and somewhat difficult to find in workers.

Firms were also asked to describe the importance they place on finding workers who have completed various educational levels and the difficulty they have in finding workers with those education levels. Construction firms viewed a high school degree as somewhat important and somewhat difficult to find, vocational degrees as very important and very hard to find, and associate degrees and above as not important to their business for those positions in which they were currently seeking employees.

Some of the major occupational skills that construction firms require in their employees were technical/vocational skills, reading, math, and customer service skills. All were viewed as being very important and very hard to find in employees. The firms interviewed foresee computer skills and communication skills as becoming more important in the future because machinery is increasingly becoming computerized and there are more non-English speaking workers. Firms are unsure whether the future workforce will possess these skills.

Firms responded that there is a need for the construction industry to be viewed more positively and that in general there is a lack of work ethic in the current workforce.

Recommendations

Steps that companies feel the State or local government could take to help reduce these labor market problems included emphasizing vocational training in schools, providing a better Eastern Shore transit system, and providing more language (English as a Second Language) programs.

They also responded that the Upper Shore Workforce Investment Board needs to work closer with the schools, develop more vocational programs, and coordinate communication between businesses.

Three of the four firms responded that they would be willing to partner with other firms in their industry to help develop strategies to improve workforce needs and three of the four firms interviewed are willing to work with the Upper Shore Workforce Investment Board in the future.

3.2.4 High Technology

The businesses interviewed for this report were primarily manufacturing firms that have high technology processes. All seven of the high technology businesses interviewed responded that they were aware of the Upper Shore Workforce Investment Board and five had used their products or services in the past. The services used were job hiring, gathering information, and assisting with displaced workers.

Each of the high technology firms that were interviewed responded that they face labor market problems that limit the ability of their firm to reach its business objectives. Firms mentioned experiencing two major problems: worker shortages and high employee turnover. The impacts of these problems are excessive training costs, higher wages in overtime pay, non-efficiencies, and the inability to expand their operations.

Six of the seven firms said that they had experienced difficulty filling job openings over the past year. The types of difficult to fill positions included machinists, mechanics, maintenance technicians, electricians, truck drivers, and data technicians. These positions generally took a period of one to three months to over three months to fill. Firms reported that the difficulty they experienced in filling these positions somewhat hindered their ability to achieve their business goals. All of the positions mentioned as being difficult to fill had existing career ladders and positions from which someone could be promoted or advanced. These promotions would require additional skills training from a community college, vocational school, or outside training programs. Firms recruited their employees locally and regionally, and also sought employees from regional educational institutions.

High technology firms were also asked to describe the importance placed on specific basic skills and the how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and somewhat difficult to find, basic math skills were very important and somewhat difficult to find. Verbal communication skills were very important and somewhat hard to find and written communication skills were somewhat important and not hard to find. Basic computer skills are viewed as somewhat important and not hard to find in workers.

Firms were also asked to describe the importance they place on worker educational levels and the difficulty they have in finding workers with those education levels. High technology firms viewed workers with a high school degree as very important and not difficult to find, vocational degrees as somewhat important and somewhat to not hard to find, and associate degrees and above as somewhat important to their business and somewhat difficult to find for those positions in which they currently face job vacancies.

The major occupational skills that high technology firms required are computer skills, vocational/ technical skills, communication skills, and interpersonal skills. All of these were viewed as being very important and very to somewhat hard to find in employees. Skills that firms feel will be more important in the future include increased computer and business skills. Business skills will be needed for firm expansion and computer skills will be needed for production machinery and tools, which are becoming increasingly computerized. Firms also said that these skills would be harder to find because they are not emphasized in the schools and that demand for them is increasing.

High technology firms commented that the local workforce is lacking in work ethic and life skills. Additionally, they feel that there is a negative perception of the Eastern Shore, the transit system is poor, and there is a great need to attract businesses and families to the Eastern Shore.

Recommendations

Firms suggested that the State or local government can address these labor market problems by investing more into the local community colleges, raising interest in vocational

occupations, expanding vocational programs, and providing an incentive for persons to stop receiving welfare assistance.

The interviewed firms also commented that the Upper Shore Workforce Investment Board should interact more with educational institutions and businesses, be more visible, and promote the Shore as a place to live and work.

Six of the seven firms said that they would be willing to partner in their industry to help resolve workforce issues. Six of the seven firms responded that they would be willing to work with the Upper Shore Workforce Investment Board in the future to address these issues.

3.2.5 Health Care

Seven of the eight health care sector firms interviewed were aware of the Upper Shore Workforce Investment Board and four of them had used their products or services. Services that were used by businesses included job fairs, job posting, and training programs.

All eight health care firms reported experiencing labor market problems and worker shortages, especially for nurses. Additional problems are the high employee turnover rate and a lack of a transit system. The lack of workers forces firms to pay increased costs associated with overtime pay and the use of employment agencies. Also, the lack of workers and high turnover leads to services being eliminated or limited.

All of the health care firms experienced difficulty filling job vacancies over the past year. Difficult to fill positions included nurses, dental hygienists, social workers, pharmacists, medical coding, and entry level positions (such as maintenance and food service). Firms took less than a month to fill unskilled positions, while skilled positions took well over three months to fill. This length of time greatly affected their ability to meet their goals. All of the skilled positions for which firms had trouble filling were positions in which there existed a career ladder and had positions from which someone could be promoted or transferred into. In order to be promoted or transferred, additional schooling or certification would be required as well as in-house training. The geographic scope of their search for employees ranged from the local area to regionally. For entry-level positions, firms searched locally, while for skilled positions they recruited locally, regionally, and nationally. Firms used advertisements, journals, and community college job placement centers as their primary means to recruit employees.

Health care firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. All of the basic skills were viewed as being very important to health care firms (reading, math, verbal and written communication, and computer skills) and are all viewed as being somewhat difficult to find in employees, except for written communication skills which are very difficult to find.

Firms were also asked to describe the importance placed on worker educational levels and the difficulty they have in finding workers with those education levels. Health care firms viewed all educational levels from a high school degree to advanced degrees as being very important and very hard to find in workers.

The major occupational skills that firms required in their workers were interpersonal, management, communication, and medical skills. These skills were all viewed as being very important and very to somewhat hard to find in employees. Skills that health care firms viewed as being more important in the future were computer and managerial skills. The reasons are

that the industry is becoming more computerized and medical firms are being run more like a business in terms of operations and profitability. Health care firms reported they feel the workforce will not possess the needed computer or management skills since workers currently lack these skills.

Health care firms expressed very specific comments on workforce issues in the Upper Shore region. Firms cited significant issues concerning drug use by employees, immigrant workers needing to improve English language skills, lack of work ethic in the current workforce, and the need to reinstate the LPN program in the High Schools.

Recommendations

Firms felt that State and local governments could help alleviate these workforce problems by promoting the health industry, supplementing training costs, and creating additional programs in the community colleges.

Firms also feel that the Upper Shore Workforce Investment Board should serve as a referral service for professionals and work more closely with the school systems.

Seven of the eight firms are willing to partner with other health care firms to address workforce issues. Seven of the health care firms interviewed were willing to work with the Upper Shore Workforce Investment Board in the future to address workforce needs.

3.2.6 Tourism

All of the tourism firms interviewed were aware of the Upper Shore Workforce Investment Board and one of the firms had used the services of the Upper Shore Workforce Investment Board in the past. This firm commented that the Upper Shore Workforce Investment Board was a great idea.

All of the three tourism sector firms responded that they face labor market problems. The types of problems they face are labor shortages and high employee turnover. As a result, firms have to constantly train workers thereby increasing costs and hindering firm growth.

All of the tourism sector firms interviewed responded that they have experienced difficulty filling job vacancies over the past year. The types of positions that were difficult to fill were maintenance, public relations, and administrative. The length that these positions took to fill ranged from one to three months. Firms responded that the difficulty they faced in filling these openings somewhat affected their ability to meet their business goals. The positions firms needed to fill were entry-level but offer upward mobility. Firms used in house and external training advertised vacant positions locally and regionally in newspapers and using word of mouth to fill these positions.

Tourism sector firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. All of the skills (reading, math, verbal communication, written communication, and computer skills) were viewed as very important and somewhat difficult to find in employees.

Firms were also asked to describe the importance placed on finding workers with certain educational levels and the difficulty they have in finding workers with those education levels. Tourism sector firms reported that having a high school degree, an associate degree, and a bachelor's degree as somewhat important and that it is somewhat hard to find workers with a

high school degree or an associate degree. Tourism firms interviewed responded that they typically are not looking to fill positions for which a bachelor's degree or higher are needed.

Some of the major occupational skills that firms required include interpersonal, communication, vocational, and computer skills. These skills are all viewed as being very important and somewhat hard to find in employees. Computer skills and public relation skills were viewed as the most important skills that the future tourism workforce must possess because the tourism industry is already starting to integrate computers into every aspect of the tourism industry and that there will be greater interaction with customers. Firms believe that workers will not possess these skills due to the fact that there are few persons in the region with these skills already.

General comments on the Upper Shore workforce were that in addition to a shortage of workers, there is a lack of public transportation, a need for better writing skills, better computer skills, and a poor work ethic in employees.

Recommendations

Firms would like to see State or local government expanding community college programs and providing more training programs in response to these problems.

All of the tourism sector firms interviewed were willing to partner in their industry to address workforce problems and all of the firms responded that they would be willing to work with the Upper Shore Workforce Investment Board in the future to address workforce issues.

3.3 Upper Shore Focus Group

A single focus group was conducted with 11 firms from the Upper Shore Workforce Investment Area on February 25, 2003. The goals for the focus group were to: a) present and validate the results of the survey and interviews; and b) identify and address any gaps in the analysis conducted. In the focus group, the results of the survey and interviews were presented followed by a summary of the major findings of the research in the following areas:

- Key workforce issues;
- The impact of workforce shortages on businesses;
- Workforce skills issues;
- Other issues; and
- Policy options,

In the focus group, business participants were asked to respond to the findings of the survey and interviews from their perspective, participate in a facilitated dialogue on the key workforce issues and policies identified, and provide their input about the effectiveness of the local workforce development system. In general, there was a strong level of agreement with the results of the survey and interviews.

In the area of key workforce issues, there was a general agreement in the focus group that finding workers with the skills required for the job is the most important workforce issue. With the economic slowdown, finding workers has become less of a challenge for businesses in some sectors, most importantly manufacturing, but remain in others (such as health or construction). In the Upper Shore region, workers were difficult to find across all skills levels. The difficulty was most severe in high-end jobs, such as senior management. Difficulty in

recruiting for high-end positions may be due to a lack of knowledge about the region. There was also general agreement that the difficulty in finding workers impacted businesses through lost sales, increased training and overtime costs, high employee turnover, and reduced opportunities for business expansion.

A key finding of the focus groups and interviews was that one of the most important workforce skills issues is the lack of “life” or “soft” skills among the region’s workforce. This was true across all sectors in the interviews and focus groups. While problems with soft skills were most prevalent among lower skill and hourly workers, even managerial staff needs improved communications skills. Businesses were generally satisfied with the basic skills of the local workforce. Math skills were identified as areas where businesses would like to see improvement, but soft skills – such as attendance, communications (verbal and written), and customer service – were identified as the key skills related issue. English as a second language was also identified as a critical issues in attracting hourly workers. Problem solving skills were seen as the most important skill set for the future. This was especially true among production workers who need to work more independently of managers as company management structures become “more flat.” Key policy options for the future include continued business collaboration with the region’s school system and increased exposure to “automation” and “business skills” in the schools.

4.0 Lower Shore Workforce Investment Area

The Lower Shore Area is essentially its own self-contained labor market, providing jobs for nearly 90% of its residents. Within the region, seasonal economics exert a relatively high influence on employment patterns in Somerset and Worcester counties. Wicomico, with its business/industrial center of Salisbury, lends stability to the regional job market. Nearly 60% of the area’s jobs are located in Wicomico County. Nearly two-thirds of the region’s jobs are provided by employers in the trade and services industries. These two business sectors will provide the momentum for future job growth in the region, accounting for 9 out of every 10 new jobs according to recent forecasts.

In the Lower Shore Workforce Investment Area, business surveys, employer interviews, and regional focus group were implemented.

- Worker shortages in both skilled and unskilled positions and high employee turnover are the major problems that businesses face.
- Firms in the interviews, surveys, and focus groups agreed that these workforce problems make it difficult for employers to achieve their business objectives and lead to increased training and hiring costs, overtime costs, and health care firms in the interviews responded that in certain cases has led to a reduction in services that can be provided.
- Eighty-four percent (84%) of the interviewed businesses expressed difficulty in filling job vacancies with 100% of the health care firms interviewed having difficulty in filling job openings, especially for the positions of nurses and radiology technicians.

4.1 Lower Shore Business Survey

In conducting the Lower Shore WIA Workforce Survey, 725 firms were selected to participate in the survey. Based on the results, useable responses were received from 218 firms, yielding a response rate of 30%.

Employers in the Lower Shore cited basic skills and training, retention of skilled workers, and technical skills development as the key workforce issues in their region.

About 40% (86) of all responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems. When asked to cite specific workforce problems, the three most frequently cited responses were finding workers with specific occupational skills, wage costs, and benefit costs.

Almost half of responding firms (49%) cited difficulty over the past year in filling job vacancies over the past year and just over two-thirds of these responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 24% indicated greatly.

When queried concerning labor needs, survey respondents primarily from food service establishments and hotels reported unfilled positions food preparation workers, restaurant cooks and maids/housekeeping cleaners. In recruiting for food preparation workers and maids/housekeeping cleaners, employers required limited prerequisite skills; short-term on-the-job training is the accepted mode for the development of job performance skills in these occupations. Employers were, however, concerned with job readiness skills. In both of these occupations, service orientation and the ability to follow directions ranked high on the list of preferred skills. The wages paid to workers in these occupational classifications were on the lower end of the scale -- not surprising in jobs where skills are acquired primarily through on-the-job training. Median wages available to maids/housekeeping cleaners at \$7.14 per hour were about 3.8 percent higher than that of \$6.88 per hour being offered to food preparation workers.

Employers in food services, in addressing their demand for restaurant cooks, were looking for workers who were not only familiar with workplace tools but also, appeared to possess a comfort level with monitoring and coordinating food preparation activities. For a job-ready cook, one possessing a combination of workplace/formal training, an experienced wage of about \$9.57 per hour is the norm in the area.

Rounding out the list of top demand occupations were carpenters, workers specific to the construction industry and registered nurses, skilled professionals found among health service providers such as hospitals, nursing homes and doctor's offices. While employer preferences leaned towards already skilled carpenters, long-term on-the-job training was an option for those individuals displaying a familiarity with industry tools and an aptitude for hands-on installation and repairing activities. Lastly, area employers also reported existing job gaps for registered nurses, an occupation which has been characterized by shortfalls across the State. In recruiting workers, the focus was on finding degreed (AA and/or above) individuals, with good service, communication and reading comprehension skills. The applicant with the appropriate combination of education/job readiness skills could expect an offer of a median salary of between \$61,000 and \$62,000 per year.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Maids/Housekeeping Cleaners	Service Orientation Active Listening Equipment Selection	Short-Term OTJ	\$6.19	\$7.73	\$7.14	\$8.49
Carpenters	Installation Equipment Selection Repairing	Long-Term OTJ	11.55	14.60	14.08	16.11
Food Prep Workers	Active Listening Service Orientation Social Perceptiveness	Short-Term OTJ	6.13	7.52	6.88	8.22
Registered Nurses	Speaking Service Orientation Reading Comprehension	Assoc. Degree	19.86	27.27	29.63	30.98
Restaurant Cooks	Equipment Selection Monitoring Coordination	Long-Term OTJ	6.92	8.68	8.50	9.57

Employers in the area were very proactive in their employee training efforts. Eight out of every ten respondents indicated that their firm provided skills training to assist in employee advancement with the most frequent training being on-the-job training.

About 36% (78) of employers, when polled, indicated that they were interested in partnering with other employers to develop skills alliances. For those employers favoring partnerships, providing expertise and space were the resources they were most willing to contribute. When asked about their willingness to participate in future workgroups, committees or task forces of the Lower Shore WIA, 25.2% (55) of respondents indicated that they were interested in participating.

4.2 Lower Shore Business Interviews

The Jacob France Institute of the University of Baltimore with the assistance of the Lower Shore Workforce Alliance interviewed twenty-five firms in Somerset, Wicomico and Worcester Counties. Businesses were interviewed in five sectors: agriculture, construction, high technology, health care, and tourism. The results of these interviews for all firms and for each sector are summarized below.

4.2.1 All Lower Shore Business Interviews

Overall, the firms interviewed were aware of the Lower Shore Workforce Alliance and its operations but few reported using its services. While 64% were aware of the Workforce Alliance, only 4% had used their products or services. This is primarily due to the fact that the Lower Shore Workforce Alliance just started its business outreach efforts. One firm used the services of Lower Shore Workforce Alliance for employee hiring and training and was satisfied with the results.

Twenty-one of the twenty-five firms (84%) interviewed responded that the major workforce problems they face are a lack of workers, most importantly skilled workers, and high employee turnover. Additionally, a majority of firms indicated that the workforce does not possess sufficient life skills or work ethic. These problems cause firms to experience higher costs in terms of training, hiring, and/or overtime pay and have caused firms to forego business expansion. For health care firms, these problems have led to the reduction in services provided.

A majority of firms (84%) had experienced difficulty filling job openings over the past year. These openings were for highly skilled and unskilled positions alike and while the lesser skilled positions were generally filled in a shorter period of time, skilled positions could remain unfilled for periods exceeding three months. Each firm responded that the unfilled job openings affected the firm's ability to achieve its business goals.

The skills that firms viewed as being more important for their future workforce needs were computer and business skills. Firms generally expected business skills to be somewhat hard to find in the future workforce since they are not addressed in the educational system, but since computer skills are more prevalent in the younger workers, firms foresee older existing workers as those who will not possess the needed computer skills.

Overall, firms viewed the greatest problem affecting the region's workforce to be a lack of life skills and work ethic. Respondents thought that a majority of the current employees do not have the necessary drive and dedication and are unable to manage their personal life in a way that affects their ability to work productively.

Recommendations

Suggestions that firms had to alleviate these workforce problems ranged from apprenticeship and internship programs, to expansion of vocational and community college programs, to greater linkages between businesses and the educational system, to improving the transit system on the Eastern Shore.

The Lower Shore Workforce Alliance has a great opportunity to expand its business outreach efforts. Eighty-four percent (84%) of the firms (21 of 25 firms) responded that they would be willing to work with other firms within their industry and 96% of firms (24 of 25 firms) interviewed would be willing to work with the Lower Shore Workforce Alliance to address workforce-related issues and problems.

The Lower Shore Workforce Alliance has a great opportunity to expand its business outreach efforts. Eighty-four percent (84%) of the firms (21 of 25 firms) responded that they would be willing to work with other firms within their industry and 96% of firms (24 of 25 firms) interviewed would be willing to work with the Lower Shore Workforce Alliance to address workforce-related issues and problems.

Lower Shore Workforce Network - Summary of Interviews

	Agriculture	Construction	High Technology	Health Care	Tourism
Firms Interviewed	1	1	8	7	8
Firms Aware of LSWA	1	0	6	5	4
Firms that use LSWA	0	0	1	0	0
Firms Facing Workforce Problems	1	1	7	6	6
Issue	lack of skilled workers	worker shortage	turnover	worker shortage	worker shortage
Issue	worker shortage		lack of skilled workers	turnover	lack of life skills
Issue			worker shortage	retention	turnover
Firms Experiencing Hiring Difficulty	1	1	7	7	5
Occupation	drivers	fabricator	engineers	nurses	housekeeping
Occupation	mechanics	drafter	technicians	radiology technician	bartender
Occupation			mechanics	janitor	server
Occupation			human resources	food service	dishwasher
Occupation			sales		cashier
Firms Willing to Partner in Industry	0	1	6	6	8
Firms Willing to Partner with LSWA	1	1	8	7	7

4.2.2 Agriculture

The single agricultural company that participated in the employer interviews had heard of the Lower Shore Workforce Alliance but had not used their products or services.

The agriculture firm interviewed expressed that it currently faces labor market problems. The problems mentioned include a lack of skilled workers and a general shortage of workers. The impact of these workers shortages is that it affected the firm’s ability to conduct business and impeded its performance.

The agricultural firm expressed difficulty filling job openings over the past year. The occupations in which they experienced difficulty were in mechanics and truck drivers. Unfilled job openings somewhat hindered the firms’ ability to meet its business goals. Both openings took over three months to fill. The driver position is an entry-level position that is recruited locally, while the mechanic position has feeder occupations and requires additional outside training. The mechanic position is recruited using a local search.

The agriculture firm was also asked to describe the importance it places on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and not difficult to find, basic math skills were somewhat important and very difficult to find, while verbal communication skills were somewhat important and not hard to find. Written communication skills were not important and not hard to find. Basic computer skills are viewed as not being important and not difficult to find in workers.

The firm was also asked to describe the importance that it places on worker educational levels and the difficulty it has in finding workers with key education levels. The agriculture firm viewed a high school degree as somewhat important and somewhat difficult to find, vocational degrees as very important and very hard to find, and associate degrees and above as not generally important to their business for the positions in which the firm was seeking workers.

Some of the major occupational skills that the agriculture firm required in its employees were mechanical/vocational skills and physical labor skills. These were viewed as being very important and somewhat hard to find in employees. Future skill needs include increased computer skills and language skills. These skills will become more important because agriculture industry is becoming more computerized. Additionally, with the shortage of local labor, firms are relying on immigrant labor, primarily Spanish speaking workers.

The agriculture firm responded that it feels that there is a lack of life skills and work ethic among today's workforce and that it is difficult to find workers willing to work labor-intensive jobs.

Recommendations

The agricultural firm responded there are steps that the State or local government can take to help reduce these labor market problems. These steps include creating additional vocational and technical programs, creating additional community college programs, and advising the educational system of jobs and careers in the agricultural industry.

While the firm was unwilling to partner with other firms in its industry, it is willing to partner with the Lower Shore Workforce Alliance in the future. Additionally, it believes that the Lower Shore Workforce Alliance should focus more attention to assisting the agricultural industry.

4.2.3 Construction

The single construction firm that participated in the employer interviews had not heard of the Lower Shore Workforce Alliance and had not used its products or services in the past.

The construction firm reported that it currently faces labor market problems. The single greatest problem that it noted was a shortage of workers. The firm reported the shortage of labor led to higher business costs in that workers are forced to work longer hours and earn overtime pay.

The interviewed firm reported difficulty filling job openings over the past year. The occupations in which it experienced difficulty were skilled positions, such as fabricator and drafter. These difficult to fill job openings somewhat hindered their ability to meet business goals. For both positions, the length of the job vacancies ranged from one to three months. Career ladders exist for both of the positions mentioned by the interviewed firm. In order to be promoted into these positions, additional training is required. A combination of in-house and outside training is used in order to promote existing workers. The firm recruited locally and regionally to fill these open positions.

The construction firm was also asked to describe the importance it places on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and somewhat difficult to find, basic math skills were very important and somewhat difficult to find, while verbal communication skills were very important and not hard to find. Written communication skills were somewhat important and somewhat hard to find and basic computer skills were viewed as being not important and somewhat difficult to find in workers.

The firm was also asked to describe the importance it placed on finding workers who have completed various educational levels and the difficulty it faces in finding workers with those education levels. The construction firm viewed a high school degree as somewhat important and somewhat difficult to find, vocational degrees as somewhat important and somewhat hard to find, and associate degrees and above as not important to their business for those positions in which they were seeking employees.

Some of the major occupational skills that the construction firm required in its employees were technical/vocational skills, physical labor, and life skills. All were viewed as being very important and somewhat to very hard to find in employees. The firm interviewed did not foresee any new or existing skills that will become more vital in the future. The firm also believes the current workforce possesses a poor work ethic, lacks motivation, and does not have sufficient life skills.

Recommendations

The firm felt that there are some steps that the State or local government could take to help reduce these labor market problems. These steps included developing more vocational programs and community college programs targeted on the construction industry. The construction firm foresaw a need for better vocational training in the educational system.

The firm also said that it was willing to partner in their industry to help develop strategies to improve workforce needs and is willing to work with the Lower Shore Workforce Alliance in the future.

4.2.4 High Technology

Six of the eight high technology businesses interviewed responded that they were aware of the Lower Shore Workforce Alliance and only one had used their products or services in the past. The services used were job hiring and training.

Seven of the eight high technology firms responded that they face labor market problems that limit the ability of their firm to reach its business objectives. There were two major problems they experienced: worker shortages (both skilled and unskilled workers) and a high employee turnover rate. These problems cause higher training costs, and also limit both the firms' ability to gain new contracts and expand operations.

Seven of the eight firms said that they had experienced difficulty filling job vacancies over the past year. The types of positions difficult to fill include engineers, mechanics, technicians, managers, and sales positions. These positions generally took a period of one to three months to over three months to fill. Firms reported that the difficulty they experienced in filling these positions somewhat hindered their ability to achieve their business goals. All of the positions mentioned as being unfilled had existing career ladders and positions from which someone could be promoted or advanced. These promotions would require additional skills training from a community college, vocational school, or outside training programs. Firms recruited employees locally and regionally and also from regional educational institutions.

High technology firms were also asked to describe the importance placed on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and not difficult to find, and basic math skills were very

important and somewhat difficult to find. Verbal communication skills were viewed as very important and very hard to find and written communication skills are somewhat important and somewhat hard to find. Basic computer skills were viewed as very important and not hard to find in workers.

Firms were also asked to describe the importance placed on worker educational levels and the difficulty they have in finding workers with those education levels. High technology firms viewed a high school degree as very important and not difficult to find, vocational degrees as very important and somewhat hard to find, and associate degrees and above as somewhat important to their business and not very difficult to find for those positions in which they currently faced job vacancies.

The major occupational skills that high technology firms required were computer skills, business skills, communication skills, and math skills. All of these were viewed as being very important and somewhat hard to find in employees. Skills that firms feel will be more important in the future include increased computer skills and business skills, especially marketing and management skills. These skills will be needed to promote firm growth and operate production machinery and tools which are becoming more computerized. Firms were unsure if it would be difficult to find these skills in the future workforce.

High technology firms commented that the local workforce is lacking in work ethic, life skills, job training, and communication skills.

Recommendations

Firms had suggested that the State or local government can help address these labor market problems by including internship programs in the schools, focusing more on math and science in the schools, and providing training funds to the firms themselves.

The interviewed firms also commented that the Lower Shore Workforce Alliance should consider providing life skills training, and work more closely with the educational system.

Six of the eight firms responded that they would be willing to partner in their industry to help resolve workforce issues. All eight of the firms responded that they would be willing to work with the Lower Shore Workforce Alliance in the future.

4.2.5 Health Care

Five of the seven health care sector firms that were interviewed were aware of the Lower Shore Workforce Alliance, but none of them had used their products or services.

Six of the seven health care firms indicated they experience labor market problems, most importantly worker shortages, especially in nursing. An additional problem is the high turnover rate. The lack of workers forces firms to pay increased costs associated with overtime pay and using employment agencies. Also, the lack of workers and the high turnover leads to services being eliminated or limited.

All seven of the firms interviewed experienced difficulty filling job vacancies over the past year. The difficult to fill positions included nurses, radiology technicians, and entry-level positions, such as janitorial and food service. Nearly all of the firms indicated that it took well over three months to fill vacancies thereby greatly affecting their ability to meet their goals. Health care firms noted that workers had the ability to be promoted or transferred into existing

open positions. In order to be promoted or transferred, additional schooling or certification would be required as well as in-house training. The geographic scope of their search for employees ranged from the local area to regionally (for entry level positions firms only searched for employees locally). Firms used newspapers, community colleges, and referral programs as their primary means to recruit employees.

Health care firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. All of the basic skills were viewed as being very important to health care firms (reading, math, verbal and written communication, and computer skills) and are all viewed as being somewhat difficult to find in employees.

Firms were also asked to describe the importance placed on worker educational levels and the difficulty they have in finding workers with those education levels. Health care firms viewed a high school degree to advanced degrees as being very important and somewhat hard to find in workers.

The major occupational skills that health care firms required but were hard to find in their workers were interpersonal, customer service, and medical skills. Computer, customer service, and business skills were also becoming more important because the industry is becoming more computerized and medical firms are being run more like a business in terms of its operations and profitability. Interviewed firms responded that they feel that the workforce will possess the needed computer skills but will not have the needed business skills, since these skills are not being taught in the educational system.

Health care firms also feel that transportation and day care issues affect the ability of people to enter the workforce therefore rendering the current workforce unstable. In addition, there is a need for more parental involvement in the schools and there is not a sufficient supply of persons entering the medical professions. Also, firms felt there was a lack of work ethic in the current workforce.

Recommendations

Firms felt that State and local governments could help alleviate these workforce problems by increasing funding for medical training programs, providing tuition support or additional scholarships for health related degrees, and removing certain restrictions on licensing. Firms also feel that the Lower Shore Workforce Alliance should provide training and funds for training and encourage persons to remain on the Eastern Shore.

Six of the seven firms are willing to partner with other health care firms to address workforce issues. All of the health care firms that were interviewed were willing to work with the Lower Shore Workforce Alliance in the future to address workforce needs.

4.2.6 Tourism

Four of the eight tourism firms interviewed were aware of the Lower Shore Workforce Alliance and none of the firms had used the services of the Lower Shore Workforce Alliance.

Six of the eight tourism sector firms said they face labor market problems. The types of problems are labor shortages, high employee turnover, and a lack of life skills. The impact these problems have on business operations is that firms have lost business, continually train workers leading to higher costs, and are recruiting entry-level employees only.

Five of the eight tourism sector firms interviewed said they have experienced difficulty filling job vacancies over the past year. The types of positions that were difficult to fill were unskilled positions such as housekeeping, wait staff, cashiers, dishwashers, and bartenders. The length these positions took to fill ranged from under one month to one to three months. Firms also said that the difficulty they faced in filling these openings somewhat affected their ability to meet their business goals. The positions that firms needed to fill were entry-level, but offer career advancement and promotions. Firms mostly advertised unfilled positions locally and regionally in newspapers in order to fill these positions.

Tourism sector firms were also asked to describe the importance they place on specific basic skills and how difficult those skills are to find in employees. Basic reading skills were viewed as being very important and somewhat difficult to find, basic math skills were somewhat important and somewhat difficult to find, while verbal communication skills were very important and somewhat hard to find. Written communication skills are very important and somewhat hard to find and basic computer skills are viewed as not being important and not hard to find in workers.

Firms were also asked to describe the importance placed on finding workers with certain educational levels and the difficulty they have in finding workers with those education levels. Tourism sector firms viewed a high school degree as very important and not difficult to find, vocational degrees as very important but somewhat hard to find, and associate degrees and above as not important to their business for those positions in which they experience difficulty in hiring.

Some of the major occupational skills that firms require include customer service, interpersonal, business, and culinary skills. These are all viewed as being very important and somewhat hard to find in employees. Computer skills are viewed as the most important skill that the future tourism workforce must possess. The reason is that the tourism industry is already starting to integrate computers into every aspect of the tourism industry. Firms believe that workers will possess these skills due to the fact that exposure to computers is already widespread.

General comments made about the Lower Shore workforce were that in addition to a shortage of workers, there is a lack of public transportation, a lack of affordable child care, and limited employment opportunities for high paying jobs. Also, there is a lack of work ethic in employees, and there are no efforts made to recruit or retain firms on the Eastern Shore.

Recommendations

Steps that firms see the State or local government taking to alleviate these problems are improving basic life skills, training in the school systems, create an incentive program for high school students to work, and expand the public transportation system. Firms believed that the Lower Shore Workforce Alliance should assist in employee recruitment, establish training programs (especially for computers), and address transportation issues on the Eastern Shore.

All eight of the tourism sector firms that were interviewed were willing to partner in their industry to address workforce problems. All of the firms responded that they would be willing to work with the Lower Shore Workforce Alliance in the future to address workforce issues.

4.3 Lower Shore Focus Group

A single focus group was conducted with five businesses from the Lower Shore Workforce Investment Area on April 14, 2003. The goals for the focus group were to: a) present and validate the results of the survey and interviews; and b) identify and address any gaps in the analysis conducted. In the focus group the results of the survey and interviews were presented followed by a summary of the major findings of the research in the following areas:

- Key workforce issues;
- The impact of workforce shortages on businesses;
- Workforce skills issues;
- Other issues; and
- Policy options.

In the focus group, business participants were asked to respond to the findings of the survey and interviews from their perspective, participate in a facilitated dialogue on the key workforce issues and policies identified, and provide their input about the effectiveness of the local workforce development system.

In the area of key workforce issues, there was a general agreement in the focus group that finding workers with the skills required for the job is the most important workforce issue. With the economic slowdown, finding workers has become less of a challenge for businesses, especially for finding information technology workers. There was also general agreement among focus group participants that the difficulty in finding workers impacted businesses through lost sales, increased training and overtime costs, high employee turnover, and reduced opportunities for business expansion. The focus group participants expressed a general satisfaction with the basic skills of the region's workforce. Focus group participants identified the lack of "soft" and "life" skills, such as customer satisfaction, work ethic and communications skills in the region's workforce, as an important labor market issue. English as a second language was also identified as a critical issues in attracting hospitality hourly workers. Key policy options to improve the workforce development system include improving the region's interaction with Salisbury State University so that the area can retain more of its graduates, improving mechanisms for screening potential job applicants at the one-stop job center, and better integrating workforce development with economic and regional development planning.

5.0 Southern Maryland Workforce Investment Area

The Tri-County Area still, to a large extent, is viewed as more of a bedroom community with relatively high out-commuting to DC, Virginia and Prince George's County. This status, one that takes into account the worker patterns in Calvert and Charles counties, rather than in St. Mary's, has, in large part, shaped the development of the region's internal employment base. Nearly two-thirds of the area's jobs are centered in the trade and services industries. While trade and services are important industries in the area and will, in future, continue to generate opportunities, the presence of several technically oriented businesses within the area and the growth that has occurred in defense contracting appears to be shaping current employer demand.

In the Southern Maryland Workforce Investment Area, business surveys and a regional focus group were implemented. Due to a number of reasons, including a recent business survey, business interviews were not conducted.

- Businesses reported having difficulty in filling job openings, especially those for which specific skills are required.
- The positions indicated through the surveys that were difficult to fill were primarily computer-related positions.
- These unfilled job openings exist for numerous reasons including the high cost of housing in the region and the higher pay scale for these skilled workers in the surrounding areas of Washington, D.C., northern Virginia, and suburban Maryland, and that local firms are not able to capture the workforce emerging from the regional college.

5.1 Southern Maryland Business Survey

In conducting the Southern Maryland WIA Workforce Survey, 737 firms were selected to participate in the survey. Based on the results, useable responses were received from 228 firms, yielding a response rate of 31%.

About 48% (109) of all responses indicated that the achievement of business objectives was being impeded by workforce or labor market problems. When asked to cite specific workforce problems, the most frequently cited problems were finding workers with specific occupational skills, wage costs, and finding workers with specific educational requirements.

Just over 57% (130) of the responses cited difficulty in filling job vacancies over the past year. Seventy-five percent (75%) of the responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 19% indicated that recruitment difficulties greatly hindered their business.

Southern Maryland's labor needs, as expressed by respondent employers, were unique compared to others in the Chesapeake Region in that the primary focus of employer demand was centered on technically oriented occupations, specifically those requiring computer-related skills. According to survey results, four of the top five demand jobs called for workers with computer skills. In three of these occupations, a bachelor's degree was the level of educational credentialing required while in the remaining position; an associate degree satisfied the educational prerequisite.

Computer software engineers, the most technically proficient of the demand occupations, apply theory in developing PC based systems to streamline/control business operations. A strong background in both math and science, coupled with an analytical ability, are skills critical to job performance in this occupation. Employers recruiting software engineers can expect to offer qualified applicants a median salary of \$75,000-\$76,000 per year, the going rate in the area according to a 2002 salary survey.

Employers also reported the need to fill vacancies for computer systems analysts and computer programmers. In both of these positions, reading comprehension and programming skills are core requirements. For systems analysts whose work involves defining system goals, identifying problems and designing solutions, the ability to troubleshoot systems is key to job performance. Computer programmers often work hand-in-hand with systems analysts,

following through with specifications developed by analysts and writing programs that enable users to execute system functions. Systems analysts currently on board with local businesses in the area are earning median salaries of \$60,500 per year, about 6 percent higher than those of programmers at \$57,000.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Computer Software Engineer, Applications	Operations Analysis Mathematics Science	Bachelor's Degree	\$28.53	\$36.79	\$36.07	\$40.92
Computer Systems Analyst	Reading Comprehension Programming Troubleshooting	Bachelor's Degree	21.41	28.62	29.08	32.21
Computer Programmer	Programming Writing Reading Comprehension	Bachelor's Degree	19.87	27.38	27.37	31.13
Computer Support Specialist	Instructing Operations Analysis Troubleshooting	Assoc. Degree	14.77	22.48	21.98	26.32
Cashier	Mathematics Service Orientation Speaking	Short-Term OTJ	6.18	7.88	7.43	8.72

Recruiting computer support specialists, the occupation in the computer hierarchy requiring an associate degree, also proved problematic for area employers. Workers in this position must be well versed in system capabilities since their primary responsibility is to assist users in system problem resolution. Employers in the area generally pay a median hourly rate of about \$21.98 for support specialists.

The supply of applicants for cashier, the only non-degreed position on the top five list, failed to support employer demand according to survey responses. In general, workers in the cashier classification bring minimal skill levels to the table; job performance skills can normally be gained through short-term on-the-job training. While employers are willing to provide job training, respondents were looking for service-oriented applicants with good communications skills and mathematical ability. Median wages for cashiers, at \$7.43 per hour, when compared to those paid in the other demand positions on the top five list, reinforce the concept that "Education Pays."

Employers in the area were very proactive in their employee training efforts. About 86% of all respondents indicated that their firm provided skills training to assist in employee advancement through on-the-job training, in-house training, and off-site training.

About 36% (83) of employers, when polled, indicated that they were interested in partnering with other employers to develop skills alliances. For those employers favoring partnerships,

providing expertise, trainers and space were the resources they were most willing to contribute. When asked about their willingness to participate in future workgroups, committees or task forces of the Southern Maryland WIA, 34% (78) of respondents indicated that they were interested in participating.

5.2 Southern Maryland Business Interviews

As a result of several research projects undertaken by Southern Maryland Works during the Community Audit research period, no interviews were conducted in Southern Maryland.

5.3 Southern Maryland Focus Groups

One focus group was held with six businesses from the Southern Maryland Workforce Investment Area on March 5, 2003. The goals for the focus groups were to: a) present and validate the results of the survey (interviews were not conducted in Southern Maryland); b) identify and address any gaps in the survey analysis; and c) collect information on the business perceptions of local labor market issues. Because no interviews were conducted in Southern Maryland, the Jacob France Institute research team conducted an analysis and review of available labor market research materials on Southern Maryland. The results of this review, as well as the results of the survey were presented to the focus group participants followed by a summary of the major findings of the research in the following areas:

- Key workforce issues;
- The impact of workforce shortages on businesses;
- Workforce skills issues;
- Other issues; and
- Policy options.

In the focus groups, business participants were asked to respond to the findings of the survey and Southern Maryland workforce development research reviewed from the perspective of their businesses, participate in a facilitated dialogue on the key workforce issues and policies identified, and provide their input the functioning on the local workforce development system.

In the focus group, the participants agreed that the chief labor market issue in Southern Maryland is the difficulty firms face in finding workers with the necessary skills. Unlike in the other three workforce investment areas where this research was conducted, worker shortages have not diminished substantially as the economy has slowed down. This may be due to the continued economic growth associated with the PAX River military facility. Information technology workers are easier to find than “when the dot.coms were booming,” but many IT workers continue to have very high salary expectations. There was general agreement with the focus group participants that worker shortages have a negative impact on businesses, especially among the region’s high technology government contractors. Focus group participants reported experiencing high employee turnover and substantial relocation costs – especially for higher skilled and professional employees. A key barrier to employee recruitment identified in the focus group is the already high and increasing cost of housing in the region that makes it difficult for lower skilled and entry level workers to find adequate housing. Southern Maryland firms must also compete with employers in the District of Columbia, Northern

Virginia and Suburban Maryland where pay scales tend to be higher. Businesses also reported that a lack of knowledge about Southern Maryland makes it difficult for firms to recruit from regional colleges and universities, even from the College of Southern Maryland, with one employer saying -- "They go elsewhere to work. We can't recruit them here."

The firms participating in the focus group reported a general level of satisfaction with the educational levels and skills of the local workforce. As in the other areas, "life" and "soft" skills, such as showing up to work on time, customer service, and communications skills, were an area of concern for regional businesses. Communications skills were a problem for both low skilled and high technology workers and a general "lack of a work ethic" was identified as a problem. When asked to discuss what skills will be most important for the workforce in the future, problem solving and critical thinking were identified as the most important. The lack of public transportation and general transportation issues were identified as barriers to attracting and retaining workers.

When asked to discuss policy options to promote workforce development, several suggestions were made. A key issue was efforts to promote local employment opportunities for the region's substantial base of well-educated, highly skilled out-commuters. Improved outreach to small businesses, many of which need help with human resources issues, improved cooperation with regional economic development departments, and efforts to market the region to potential workers were also identified as potential workforce development options.

6.0 Industry Cluster Analysis

In addition to the Workforce Investment Area analysis presented above, a core goal of the Community Audit project is to identify key workforce issues at the industry level. Thus, the results of the Community Audit Business Survey for key questions are presented below. In addition to the survey analysis, a State-level focus group was conducted with businesses from each of the five industry clusters. The goal of the Industry Cluster Focus Groups was to validate the results of the research conducted and evaluate whether the results of the research conducted in each of the four Workforce Investment Areas is applicable to the state and as a whole.

6.1 Industry Cluster-Level Survey Results

6.1.1 Agriculture

The Agriculture Cluster, the smallest of the survey clusters, consists of businesses engaged in the agricultural production of crops/livestock and varied agricultural services such as veterinary and landscaping services. Within the cluster, landscaping services, an industry that has experienced sizeable growth over the past few years, represents the largest source of employment.

Workforce Survey

In conducting the combined area survey, 154 agricultural employers were selected to participate in the survey. Based on the results, useable responses were received from 65 firms, yielding a response rate of 42%.

Employers noted the issues having the greatest impact on their business included workers basic skills and training, retention of skilled workers, access to child care, and access to labor market information.

Forty-eight percent (48%) of the responses cited difficulty in filling job vacancies over the past year and nearly two-thirds of these responses indicated that recruitment difficulties hindered attainment of business goals somewhat.

Participating employers, when queried concerning their labor needs, specified demand for workers at varying degrees of skill and experience. Just over 47% of the unfilled demand identified by employers was centered in five occupations.

Veterinarian, the top demand occupation, required the highest educational credentialing and skill proficiency levels. Six years of academic study, including college study prior to entering a professional degree program, is the norm for someone seeking licensing as a veterinarian. Employers cited science, critical thinking, reading comprehension and judgment/decision making as the skills of utmost importance in this occupation. Qualified applicants could expect to be offered a median wage of about \$31.26 per hour, translating into an annual salary in the range of \$65,000-\$66,000.

The preferred candidate in the search for Supervisor/Managers of landscaping/lawn care workers, while not requiring high levels of education, nonetheless, needed to have prior supervisory experience in order to warrant consideration. This management experience, coupled with active listening, speaking and mathematics skills, was the criteria used by employers looking to fill vacancies in the area at a median pay rate of \$16.55 per hour.

On-the-job training, both short and long-term, characterized the remaining occupations on the top demand list. Light/delivery truck drivers, with operation control/monitoring skills and veterinary assistants/lab animal caretakers, with science ability and active listening skills, were occupations where experience could be gained with short-term training. Farm and nursery laborers, on the other hand, needed more than twelve months of training or combined work experience in order to satisfy employer requirements. Median wages for these occupations ranged from a low of \$9.66 for vet assistants to a high of \$11.31 for truck drivers.

Top Vacancy Occupations						
Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Veterinarians	Science Critical Thinking Reading Comprehension	Professional Degree	19.73	32.56	31.26	38.99
Farmworkers/Laborers, Crop, Nursery & Greenhouse	Equipment Selection Quality Control Analysis Monitoring	Long-Term OTJ	6.57	10.03	10.06	11.76
Veterinary Assistants & Laboratory Animal Caretakers	Science Active Listening Equipment Selection	Short-Term OTJ	6.96	9.25	9.66	10.41
Supervisors /Mgrs. of Landscaping, Lawn Serv. & Groundskeeping Workers	Personnel Management Active Listening Speaking	Work Experience	11.60	17.39	16.55	20.28
Truck Drivers, Light or Delivery	Operation & Control Operation Monitoring Equipment Maintenance	Short-Term OTJ	8.14	12.70	11.31	14.98

6.1.2 Construction

The construction industry is comprised of three major segments – general building contractors who generally work on residential/commercial building construction, heavy contractors whose projects include building activities related to highways, bridges, and tunnels and the largest component, special trade contractors, who engage in activities such as carpentry, plumbing and electrical work. Whatever the activity, seeing a construction project through its multi-phases – its planning, designing, actual building and post-construction maintenance – requires a diverse cross-section of worker skills.

Workforce Survey

In conducting the combined area survey, 572 construction firms were selected to participate in the survey. Based on the results, useable responses were received from 239 firms, yielding a response rate of 42%.

Employers cited the issues of skilled worker retention, basic skills and training of workers, and technical skills development as having the greatest impact on their business.

About 58% (139) of the responses cited difficulty in filling job vacancies over the past year with nearly three-fourths of these responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 21% indicated that vacancies greatly hindered attaining their business goals.

The record low interest rates over the past year have encouraged both homebuilding/remodeling and commercial construction activities. With this surge in activity,

contractors have been hard pressed to find workers to fill their labor needs. According to survey results, employers in the area expressed demand for both skilled tradesmen such as carpenters, electricians, plumbers, HVAC mechanics/installers and for unskilled laborers.

Vacancies reported for these worker groups accounted for about 45% of the unfilled demand cited by survey participants. While skill requirements vary according to specific occupation, employers, in general, were focusing on the importance of maintaining industry standards by recruiting workers skilled in equipment selection, mathematics, equipment operation/control and coordination.

In the skilled construction craft occupations, which generally require formal education followed by apprenticeship programs, some of the most commonly sought after skills by employers were installation, equipment selection, repair and troubleshooting. Pay rates for skilled tradesmen formed a relatively tight band, with median hourly rates ranging from a low of \$16.12 for HVAC mechanics/installers to a high of \$16.49 for electricians.

Construction laborers, workers who are often required to perform a wide range of physically demanding job tasks, were another worker group creating a void in the area's construction work force. Laborers, who generally develop the skills needed for job performance through moderate duration OJT by observing and working with more experienced workers, earn a median rate of about \$11.24 per hour in the area.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Carpenters	Installation Equipment Selection Repairing	Long-Term OTJ	12.72	17.18	16.26	19.42
Construction Laborers	Equipment Selection Operation & Control Mathematics	Moderate Term OTJ	8.90	11.62	11.24	13.00
Electricians	Installation Troubleshooting Repairing	Long-Term OTJ	11.66	17.25	16.49	20.04
Plumbers & Pipefitters	Installation Equipment Selection Operation & Control	Long-Term OTJ	11.96	16.73	16.26	19.11
HVAC Mechanics & Installers	Installation Troubleshooting Repairing	Long-Term OTJ	10.40	15.98	16.12	18.76

6.1.3 Health Care

The aging of the population and the growing emphasis on preventive medicine has driven demand in the health care industry. In order to determine unfilled demand within the industry, the survey was directed to a diverse group of area health care providers, including

hospitals, nursing care facilities, varied health practitioners' offices, labs and home health care services.

Workforce Survey

In conducting the combined area survey, 323 health-related businesses were selected to participate in the survey. Based on the results, useable responses were received from 145 firms, yielding a response rate of 45%.

Health care employers cited the retention of skilled workers, worker basic skills and training, and worker technical skills development as factors having the greatest impact on their business.

About 63% (92) of the health care firms cited difficulty over the past year in filling job vacancies with nearly two-thirds of these responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 24% indicated that the vacancies greatly affected achieving their business goals.

When asked to identify demand occupations, employers indicated that about 46.2% of their unfilled demand was centered in five occupations. Training/qualifications required varied according to occupation. Two of the top five required applicants to possess at least an associate degree, one required postsecondary vocational training and the two remaining offered OJT as a means of developing job performance skills.

Vacancies were most prominent for registered nurses – an occupation designated as a critical demand occupation across the state. Employers emphasized the need to recruit service-oriented individuals with at least an associate degree. Employers also felt that the ability to interact effectively with other health professionals/support staff and patients was critical to job performance, making communication skills the highest ranked of preferred skills. Dental hygienists, with openings accounting for about 14.4% of the top unfilled demand, also required at least an associate degree. For nurses, hourly wages ranged from an entry level of \$19.67 to an experienced level of \$29.76, with a median of \$27.48. The median rate for hygienists was about 11% below that of RN's at \$24.75 per hour, with a range of \$16.44-\$26.92.

Reporting employers also cited unfilled demand for LPN's, an occupation requiring completion of an approved post-secondary training program and licensure. LPN's, while found in a hospital setting, tend to be more highly represented in nursing care facilities. LPN's, in their capacity as bedside care providers, need to have above average listening and service skills. The difference between the wages of RN's and LPN's, both caregivers, is distinguished by educational credentialing. For LPN's, the median hourly rate is \$16.93, slightly less than two-thirds that paid to RN's.

Rounding out the vacancy listing were postings for nurses' aides and dental assistants. Training requirements for these occupations were similar in that both offered OJT, however, the duration required for acceptable job performance was considerably longer (1-12 months) for dental assistants as opposed to that of approximately 1 month for nurses' aides. Service orientation was the skill most important to employers in their search for nurses' aides while coordination skills ranked highest on the preferred skills listing for dental assistants. The additional training required in becoming a dental assistant paid off in terms of wages; the median wage rate for dental assistants was about \$2.00 per hour higher than that of \$10.39 offered to nurses' aides.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Registered Nurses	Speaking Service Orientation Reading Comprehension	Assoc. Degree	19.67	26.40	27.48	29.76
Nurses' Aides, Orderlies and Attendants	Service Orientation Social Perceptiveness Active Listening	Short-Term OTJ	8.00	10.73	10.39	12.10
Dental Assistants	Coordination Active Listening Speaking	Moderate Term OTJ	7.91	11.99	12.41	14.03
Dental Hygienists	Reading Comprehension Speaking Science	Assoc. Degree	16.44	23.42	24.75	26.92
Licensed Practical Nurses	Active Listening Service Orientation Reading Comprehension	Vocational Training	14.18	17.20	16.93	18.72

6.1.4 High Technology

The high technology industry is an umbrella under which a diverse group of manufacturing and services industries are found. The types of products produced and the kinds of services provided form the criteria for determining whether or not a business falls into the technology category. While staffing patterns in the technology industry run the gamut, some of the “key players” in the industry are those workers with computer skills.

Workforce Survey

In conducting the combined area survey, 213 technology businesses were selected to participate in the survey. Based on the results, useable responses were received from 95 firms, yielding a response rate of 45%.

High technology employers cited worker technical skills development, retention of skilled workers, worker basic skills and training, and access to labor market information as factors having the greatest impact on their business.

Over half (57%) of the firms cited difficulty in filling job vacancies over the past year with just over three-fourths of these responses indicated that recruitment difficulties hindered attainment of business goals somewhat.

When queried concerning their vacancies, the top five demand occupations, accounting for nearly 50% of the overall industry demand, involved computer-related tasks. Each of these positions was characterized as a professional occupation, with all but one, computer support specialist, requiring educational credentialing at the bachelor degree level.

The most technically sophisticated demand occupations, characterized as such because of the higher degree of complexity and advanced technological skills required in job performance, were computer software applications engineers and computer hardware

engineers. The most sought after applicants in these occupations were those skilled in operations analysis, with both a math and science background. Workers in these occupations tend to make top dollar, with the annual median salary for applications analysts at between \$74,000-\$75,000, about \$10,000 higher than that normally paid to hardware engineers.

Computer programmers and computer systems analysts, occupations in which both programming and reading comprehension skills rank high among employer preferences, accounted for a combined total of about 20% of overall industry demand and about 41% of the top five demand.

Computer support specialist, a position open to applicants with an associate degree, rounded out the list of top demand occupations. Persons in this position interface with users, providing technical assistance and assessing/resolving customer issues. For those manning the “help desk”, the ability to interpret user problems, to identify problem sources and to determine the most appropriate course for resolution are essential skills. Employers in the area generally pay a median hourly rate of about \$17.21 for computer support specialists, with entry-level wages averaging \$12.87 and those for experienced specialists at \$21.94.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Computer Software Engineer, Applications	Operations Analysis Mathematics Science	Bachelor’s Degree	27.58	36.53	35.84	41.00
Computer Programmer	Programming Writing Reading Comprehension	Bachelor’s Degree	12.15	17.56	13.21	20.26
Computer Systems Analyst	Reading Comprehension Programming Troubleshooting	Bachelor’s Degree	20.28	28.17	28.49	32.06
Computer Support Specialist	Instructing Operations Analysis Troubleshooting	Assoc. Degree	12.87	18.92	17.21	21.94
Computer Hardware Engineer	Operations Analysis Mathematics Science	Bachelor’s Degree	20.98	30.29	31.17	34.94

6.1.5 Tourism

The tourism cluster is made up of a diverse group of businesses in the retail trade, transportation and services sectors. Tourism, a major source of revenue in the area, draws its strength from the many travelers – both in-state and out-of-state – looking to take advantage of the amenities/attractions that the region has to offer. The beaches, water recreational activities, seafood and the scenic landmarks provide the drawing power for tourist exploration.

Workforce Survey

In conducting the combined area survey, 1,309 tourism businesses were selected to participate in the survey. Based on the results, useable responses were received from 293 tourism-related, yielding a response rate of 22%. The largest number of responding businesses was from retail trade.

Employers cited worker basic skills and training, technical skills development, retention of skilled workers, regional transportation/planning, and access to child care as factors that have the greatest impact on their business.

Slightly over half (51%) of the responses cited difficulty over the past year in filling job openings with nearly two-thirds of these responses indicated that recruitment difficulties hindered attainment of business goals somewhat and 25% indicated that it greatly affected them.

While there exists a wide diversity of worker skills required to fill the employment needs in tourism-related businesses, very few openings were reported for higher level positions. The majority of existing vacancies were for front-line workers – employees generally associated with keeping day-to-day operations running. Four of the top five demand occupations identified reflected the need to fill openings for unskilled labor whose job proficiency could be gained through short-term on-the-job training.

Among these occupations, employers were focusing their recruitment efforts on waiters/waitresses, cashiers, food preparation workers and maids/housekeeping cleaners. In filling vacancies for these unskilled workers, employers were interested in finding applicants with certain job readiness skills. For both waiters/waitresses and cashiers – occupations involving higher levels of public contact, service orientation was important. For waiters/waitresses, active listening also ranked high on the list of preferred skills while, for cashiers, mathematical ability was an important consideration. Familiarity with the tools of the trade was a favored skill among maids and food prep workers.

The wages paid to workers in these occupational classifications tend to be on the lower end of the scale. For waiters/waitresses, where tip income often supplements employer paid wages, the median pay rate was assessed at a low of \$6.53 per hour. Wages in the remaining occupations were relatively close, with maids earning the highest hourly rate at \$7.54.

Restaurant cooks represented another soft spot in the workforce within the tourism industry. Cooks, although another occupation where OJT is the acceptable method through which job proficiency is achieved, generally require more extensive training of a year or more. Formal classroom instruction combined with work experience can also provide the appropriate training needed to work as a cook. Learning the appropriate kitchen tools to use, how to monitor simultaneous cooking activities and how to coordinate operations to ensure optimum meal preparation are some of the most valued occupational skills. While wages paid to cooks vary according to size and type of restaurant, the median wage established for restaurant cooks is \$8.89 per hour. Dependent upon prior work experience/aptitude, cooks can earn as low as \$7.13 as an entry-level wage or as high as \$10.29 at the experienced level.

Top Vacancy Occupations

Occupation	Skills	Training Level	Hourly Wage Rates			
			Entry	Mean	Median	Experienced
Cooks, Restaurant	Equipment Selection Monitoring Coordination	Long-Term OJT	7.13	9.23	8.89	10.29
Waiters & Waitresses	Service Orientation Active Listening Speaking	Short-Term OTJ	6.16	6.82	6.53	7.15
Cashiers	Mathematics Service Orientation Speaking	Short-Term OTJ	6.14	7.68	7.27	8.44
Maids & Housekeeping Cleaners	Service Orientation Active Listening Equipment Selection	Short-Term OTJ	6.23	8.00	7.54	8.89
Food Preparation Workers	Active Listening Service Orientation Social Perceptiveness	Short-Term OTJ	6.16	7.79	7.23	8.60

6.2 Industry Cluster-Level Focus Group Results

Focus groups for firms within each sector were held with numerous businesses across the State to: a) present and validate the results of the survey and interviews; and b) identify and address any gaps in the analysis conducted. In the focus group, the results of the survey and interviews were presented followed by a summary of the major findings of the research in the following areas:

- Key workforce issues;
- The impact of workforce shortages on businesses;
- Workforce skills issues;
- Other issues; and
- Policy options.

In the focus groups, business participants were asked to respond to the findings of the survey and interviews from the perspective of their businesses, participate in a facilitated dialogue on the key workforce issues and policies identified, and provide their input on the functioning of the local workforce development system.

6.2.1 Agriculture Industry Focus Group

A single focus group was conducted with the Maryland Agricultural Commission representing the agricultural industry on September 10, 2003. In the area of key workforce issues, there was strong agreement in the focus group that finding workers with the skills required for the job is the most important workforce issue facing the agricultural sector. But

while it is difficult to find workers, there are additional issues plaguing the industry. These issues included insurance coverage (liability and workers compensation) for smaller operations, the inability to pay wages competitive with less labor-intensive jobs, and negative perception of agricultural operations. There was also general agreement among focus group participants that these issues affect their ability to operate, hire workers, and is leading to a decline in the ability of smaller agriculture firms to sustain operations. With regards to the general workforce, firms responded that there was an increased dependence on migrant workers and family members. Businesses responded that they feel there is an image problem associated with the agriculture industry and that the educational system has not only perpetuated the negative image of the industry, but does not adequately prepare workers in agricultural occupations.

In the area of workforce skills needs, the focus group participants reported that greatest issues firms face is in the area of “soft skills” and “life skills” of the workforce. Participants responded that the lack of work ethic is a major issue and the employer has to do the work of the parents. Additional issues were that the workforce does not want labor-intensive jobs and the wages that firms are able to pay are not competitive with non-labor intensive occupations. For the future workforce, businesses agreed that there is a need for ways to share resources across smaller firms and there is only a limited pipeline of workers for the agriculture industry.

In regards to policy options, firms felt that there were two main issues. First, improve the image of the agriculture industry as a place to work. Second, work with the educational system to: 1) upgrade the current skills of current workers; and 2) get future workforce and educators interested in agriculture through both creating a curriculum to prepare the future workforce and making educators understand the rural/agricultural setting and its importance.

6.2.2 Construction Industry Focus Group

A single focus group was conducted with six businesses from the construction industry on June 24, 2003. In the area of key workforce issues, there was general agreement in the focus group that finding workers with the skills required for the job is the most important workforce issue facing the construction sector. But while it is difficult to find workers, especially high quality workers, turnover is also a major issue. The issue of turnover usually arises out of conflicts with supervisors. There was also general agreement among focus group participants that the difficulty in finding workers impacted businesses through lost sales, increased training and overtime costs, high employee turnover, and reduced opportunities for business expansion. Time deadlines for worker shortages and turnover, which also creates tighter margins on projects. With regards to the general workforce, firms responded on an increased dependence on migrant workers, but responded that it is becoming increasingly difficult to find these workers. Businesses responded that they feel there is an image problem associated with the construction industry and there is no marketing of the construction industry.

In the area of workforce skills needs, construction industry focus group participants reported that the greatest issues firms face is the lack of “soft skills” and “life skills” of the workforce. Also, firms responded that communication skills across all workers levels and listening skills are lacking in workers and literacy of both Spanish-speaking and English-speaking workers are a problem. For the future workforce, businesses agreed that there is a

need for ways to share resources across smaller firms and there is no pipeline of workers in the construction trades.

In regards to policy options for the construction industry, firms felt that there were two main issues. First, improve the occupational image of the construction industry to potential workers through advertising programs. Second, work with the educational system to 1) upgrade the current skills of current workers; 2) get future workforce interested in construction; 3) create a curriculum to prepare the future construction workforce. Several construction companies see expanding construction industry training programs in poorer urban communities as a key untapped potential market for additional workers.

6.2.3 Health Industry Focus Group

A single focus group was conducted with fourteen businesses from the health care industry on June 25, 2003. In the area of key workforce issues, there was strong agreement in the focus group that the shortage of health care workers is the most important workforce issue facing the sector. This shortage of workers is a result of several different factors. In rural areas, where nursing is still very much an occupation for women, there are limited job opportunities for their husbands. Also, there are limited openings in core medical training programs across the board, from the community college level to the masters programs. There also exists a general lack of instructors in core training programs, most importantly in 2 and 4 year nursing programs. In lower skilled health care occupations, workers are leaving health care for jobs in the service and retail sectors, where the issues of mandatory night and weekend work, or having to deal with biohazard waste is not an issue.

Occupations that are difficult to fill included nurses, medical secretaries, medical technicians, imaging technicians, pharmacists, and housekeeping. Businesses report that worker shortages result in quality of care issues for patients, and increased worker retention efforts. These efforts include increased salary, benefits, flexible scheduling, and paying for additional education. Employers have found these efforts to be somewhat effective, but are not solving the issue of filling existing job vacancies. Firms have turned to agency nurses, which lead to increased costs, staffing issues, and have found that there is a difference in quality of care between agency nurses and in-house staff. Another means of dealing with the shortage has been the importation of foreign labor, most importantly in nursing. However, foreign recruiting often involves high recruiting costs, delays since the process can take up to three years, and once the workers are in the United States, they may choose to leave the employer.

In the area of workforce skills, health care focus group participants reported that the greatest workforce skills issues are the lack of "soft skills" and "life skills" in workers. Workers have an attitude of "give me" and are not dedicated to their occupation. Communication and organizational skills are also lacking and firms responded that a large number of applicants for lower-skill level jobs were functionally illiterate. In the area of future workforce needs, businesses agreed that computer skills and business skills are becoming increasingly important. Programs to teach business skills to medical staff will need to be created and implemented. In regards to policy options for the health care industry, firms responded that community college and four-year programs need to be expanded. Additionally, funding to medical training programs needs to be increased, starting in the high schools. Firms responded that the current

vocational/technical programs are not sufficiently preparing health care workers in either quantity or quality. Additionally, the health care professions need increased marketing, where occupations need to be promoted in the school systems. Firms also mentioned that issues surrounding the public transportation system and childcare have a major impact on staffing ability.

6.2.4 High Technology Industry Focus Group

A single focus group was conducted with eleven businesses from the high technology industry on June 25, 2003. In the area of key workforce issues, there was strong agreement in the focus group that the shortage of high technology workers is the most important workforce issue. There was a general agreement in the focus groups that these shortages have continued in key areas, even with the slow-down in the technology sector. Higher education programs were not seen as providing enough workers in key areas and as "too academic" and do not provide the core skills required by actual employers. Occupations that are difficult to fill included software engineers, electrical engineers, and project managers. Focus group participants reported that the shortage of workers negatively impacts their businesses in several different ways, including increased training, overtime costs, and an inability to expand operations. If they are awarded a contract and do not have the needed workers, they have to hire the workers quickly increasing recruiting costs. Sometimes high technology businesses must hire lower quality workers in core positions that need to be filled and provide substantial training, especially in technician and production occupations.

In the area of workforce skills, high technology businesses reported that the critical skills shortages were team and interpersonal skills. Firms also believed that one of every ten applicants is unqualified due to drug screening or background checks. For the future workforce, businesses agreed that while computer skills will be significant, business skills will become increasingly important. Team skills are becoming increasingly important to high technology businesses.

In regards to policy options for the high technology industry, firms responded that there needs to be increased partnering with Universities, there needs to be increased funding into the school systems, and firms need to work with the educational system to prepare children younger than high school for the future workforce. A final option made was for the State government to place greater emphasis on high technology training programs for women and minority workers.

6.2.5 Tourism Industry Focus Group

A single focus group was conducted with ten businesses from the tourism industry on June 24, 2003. In the area of key workforce issues, there was a general agreement in the focus group that finding workers with the skills required for the job is the most important workforce issue. Occupations where businesses reported particular difficulty filling included managers, contract cleaning, and seasonal employment/labor. There was also general agreement among focus group participants that difficulty finding workers impacted businesses through lost sales, increased training and overtime costs, high employee turnover, increased capital costs, reduction of quality of service, as well as reduced business expansion opportunities. With

regards to the general workforce, businesses responded that many workers see the hospitality industry as a “pass through” to a “real job”. Due to difficulties in finding workers and restrictions on hiring migrant workers, businesses are turning to volunteers for some staffing in some hospitality areas, such as concessions or events.

The focus group participants reported that the most important workforce skills issues in the tourism sector were the lack of “soft skills” and “life skills”. Drugs is also a pervasive issue that affects the workforce and there is a lack of work ethic because workers have no appreciation for their jobs. The greatest skills firms found lacking is communication skills (especially for Spanish-speaking workers), time management skills, and customer service skills. For the future workforce, businesses agreed that there is a need to expose workers to the environment that they are going to work in. Additionally, firms acknowledged that they are impacted by a poor transportation system in which not all counties have access to mass transit, thereby limiting job accessibility for potential workers. Even in areas such as Baltimore where mass transit systems exist, businesses reported that routes and time of service issues still hinder accessibility.

In regards to potential workforce policy options for the tourism industry, firms believed that major emphasis should be placed on the education system to prepare the future workforce. Education should comprise both class study and practical experience and younger people should be given jobs. While training programs and internships are helpful, they alone are not totally effective. A possible option would be to have interactive job fairs that are selective as a reward and are not guaranteed to all students.

6.3 Industry Cluster -Level Career Ladders

A career ladder is the progression through which an employee may advance to reach the top grade of a particular job. While a large percentage of firms indicated that they currently experience worker shortages, there was no connection between the number of openings and the number of positions for which career ladders exist. In fact, career ladders existed for a relatively small number of positions since a majority of firms indicated a need for entry-level positions, such as laborers in the construction and agriculture industries, for which career ladders do not exist. Additionally, in several cases, the occupational requirements were so focused, specific skills were a necessary requirement and no positions existed from which someone could be trained to further educate to fill the position. For those firms that did have an opening for which there are career ladders, there were two primary ways in which employees could move up the ladder: 1) through additional on-the-job training; and 2) through obtaining an additional educational degree. Additional in-house training was used as a method of promoting a machine operator to the position of machinist in the high technology industry cluster. While additional in-house training can be used to promote housekeepers in the health care industry to that of dietary aide or hospitality aide, only an educational degree in nursing can move a LPN to the position of a registered nurse. While there were only a select number of positions that lent themselves to career ladders identified through this research, firms in general were very supportive of the idea of using in-house, outside training, or an educational degree to promote existing employees into current or projected job vacancies.

Industry Level Career Ladders

	Agriculture	Construction	High Technology	Health Care	Tourism
Shortage Occupation	Mechanic	Technician	Foreman	Nurse	Manager
Feeder Occupation	Mechanic Helper	Installer	Asst. Foreman	LPN	Chef
Feeder Occupation	Laborer	Apprentice	Project Manager	Nursing Asst.	Cook
Feeder Occupation		Helper	Equipment Operator	GNA/CNA	Waitstaff
Feeder Occupation				Hospitality Aide	Host/Hostess
Feeder Occupation				Dietary Aide	Dishwasher
Feeder Occupation				Housekeeping	
Training Required	In-house/Outside Training	In-house	In-house/Outside Training	Educational Degree	In-house
Shortage Occupation	-	-	Engineer (various types)	Pharmacist	Chef
Feeder Occupation	-	-	Junior Engineer	Pharmacy Tech.	Cook
Feeder Occupation	-	-	Technician		Waitstaff
Feeder Occupation	-	-			Host/Hostess
Feeder Occupation	-	-			Dishwasher
Training Required			Educational Degree	Educational Degree	Educational Degree
Shortage Occupation	-	-	Machinist	-	Waitstaff
Feeder Occupation	-	-	Machine Operator	-	Host/Hostess
Feeder Occupation	-	-		-	Dishwasher
Feeder Occupation	-	-		-	
Training Required			In-house		In-house

7.0 Conclusion

Across regions and across industry clusters, there is a definite shortage of both skilled and unskilled workers. Besides a need for workers, businesses have expressed that workers lack sufficient life skills or work ethic. The issues of work ethic and life skills can be addressed through the school systems where classes can be developed to teach and reinforce these skills. They can also be addressed through programs at the One-Stop Shops. In regions experiencing critical skills and worker shortages, businesses can work with the Workforce Investment Boards, and the Community Colleges to create or expand programs that will better prepare a local workforce and fill the needs of the business community. Finally, businesses have expressed strong interest in working with other businesses within their region to form skills alliances and to work with the local Workforce Investment Board.

Chesapeake Workforce Alliance



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