

MAINE DEVELOPMENT FOUNDATION

**Raising Levels of Education and
Training Beyond High School in
Washington County:
Past Accomplishments and
Potential Future Strategies**

FINAL DRAFT

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Executive Summary

The Maine Development Foundation (MDF), Maine Community Foundation, and Sunrise County Economic Council (SCEC) have collaborated on a literature review of reports exploring the connections between Washington County's educational structure, levels of educational attainment, economy, and economic development. This literature review was conducted to inform an exploratory process involving public, private, and nonprofit organizations in Washington County that is gauging the interest, opportunity, and leadership to support a comprehensive collaborative initiative aimed at increasing the levels of post-secondary educational attainment and training among youth and adults. This paper is the result of an extensive review of approximately twenty reports by a range of organizations on a number of topics related to education and economic development. The themes of these reports included early childhood development and child well-being, youth migration, college preparedness, labor market trends, higher educational attainment, the community college system, worker retraining, demographic and economic characteristics, and the aspirations of Washington County's young people.

This paper summarizes the key findings and recommendations from these past studies and highlights common themes and strategies. In preparing the report, Maine Development Foundation has also drawn from the findings of Making Maine Work, a 2010 report that summarized the top issues facing Maine identified in other research and by business leaders through surveys and interviews.

Economic Changes

Maine's economy has been and continues to shift from producing goods to providing services, and the change has been most dramatic in rural areas like Washington County. Traditional industries like manufacturing and construction are in decline, and displaced Washington County workers often lack the skills needed for jobs in emerging industries.

Attraction and Retention

Young people, particularly those performing better in school and from higher income families, are leaving Maine in search of better educational or job opportunities elsewhere. Again, the problem hits rural Maine hardest; young people are more likely to leave, and less likely to return to, rural areas. As young people leave, they take their talent and entrepreneurship with them, and businesses may have trouble replacing aging members of the workforce.

Foundations for Success

A positive environment is crucial to the development of young children, and this, in turn, has enormous impacts later on in life in terms of health and wellness, educational success, and employment outcomes. Economic conditions in Washington County create challenges for families in providing an environment that supports positive childhood development. Likewise, certain conditions create obstacles to higher education, and many of these are prevalent in Washington County.

Growing Skills Gap

In years past, jobs in Washington County's primary industries may not have required a large amount of formal training and education. However, as traditional industries become more complicated and

new industries emerge, educational attainment, knowledge, and skills are the key to success. More is being demanded of workers, and the county's comparatively low educational attainment means that its workers are less well prepared for positions in today's economy than workers in other regions. This is an impediment to economic development. With current demographic trends, the workforce of today will predominantly be tomorrow's workforce as well; therefore, improving the educational attainment and skill level of both current workers and young people is crucial.

Institutional Assets

Washington County's educational institutions are an asset for educational and economic improvement within the county. They have the opportunity to provide students of all ages with access to educational opportunities locally. Research by SCEC confirms that many young people, especially those seeking an advanced education, intend to leave the area. It is therefore important that these institutions offer programs that appeal to local residents and are relevant to the needs of Washington County and its current and future industries.

Many of the issues in Washington County are shared by the state overall and particularly the state's other rural areas. These issues are real, but they are not insurmountable. Of the reports reviewed for this project, seven identified recommendations specific to Washington County. These key themes and findings are addressed below.

Key Challenges Facing the Region:

1. Washington County's economy offers fewer full-time employment opportunities than other areas of the state; residents often engage in seasonal, project-oriented, and part time work, and informal transactions, to make ends meet
2. Washington County's level of formal higher degree attainment trails the state average
3. Washington County's traditional natural resource- and manufacturing-based industries have declined and are expected to continue to do so
4. The incumbent workforce's skill set and level of educational attainment is geared toward these industries and is not a good fit for existing and emerging opportunities in potential growth industries (including health care, wind and tidal energy, and advanced manufacturing)
5. As a result of this and Washington County's relatively small workforce, it is difficult for businesses to find workers, which may be a deterrent to businesses remaining in or moving to the region
6. Many residents in Washington County are struggling to meet day-to-day needs, which makes planning for the future difficult
7. Many young people, particularly those with higher levels of education and skills, are unable to find careers in their fields, making attraction and retention difficult
8. Declining school enrollment poses challenges for educational institutions

Areas of Opportunity:

1. Improve the quality and expand the availability of early childhood development offerings, and emphasize its importance to future educational achievement. "Unleashing the Potential", "Maine Kids Count 2010" and "Prepare Maine" suggest this as a general course of action for the state as a whole. Examples include Head Start and the Community Caring Collaborative.
2. Expand existing efforts to increase college readiness, expose high school students to the college

experience, and assist with college planning. The Washington County Economic Development Task Force and the Mitchell Institute’s research highlight the importance of these programs. Early college programs at the University of Maine at Machias (UMM) and Washington County Community College (WCCC) have helped reduce the need for developmental courses among entering college students.

3. Provide additional financial assistance and financial planning for higher education to address the concerns about financial resources cited by the Mitchell Institute and the economic indicators listed above. This is also recommended by the Washington County Economic Development Task Force.
4. Reinforce the value of educational attainment and skill development at all age levels. This is suggested directly by the Washington County Education and Economic Development Alliance and is also based on the Mitchell Institute’s findings in “Barriers to Higher Education” and the Department of Labor’s findings regarding the importance of skill development and educational attainment. An example is SCEC’s Young Adult Scholarship Program, which provides scholarships to young adults of low to moderate income for training and certification programs that increase their opportunities for immediate employment or job advancement. Cobscook Community Learning Center is another example of work in this area.
5. Increase higher education opportunities for adults by adequately funding and marketing adult education programs. This also comes from the Washington County Education and Economic Development Alliance and builds on the Department of Labor’s findings. Currently, state funding is provided for Calais, Machias, and Narraguagas. Efforts should be made to increase accessibility and create a “critical mass” in the eastern portion of the county.
6. Help to raise the aspirations of students and members of the workforce by informing them of the job opportunities that higher levels of education and training make available to them. This suggestion is based on the findings of the Mitchell Institute’s “Barriers to Higher Education” and the Washington County Education and Economic Development Alliance. Maine Centers for Women, Work and Community’s Totally Trades program is designed to encourage girls to consider traditionally male-dominated career fields. Career Center and JMG job fairs are other examples.
7. Ensure educational programming at all levels is relevant to Washington County and its existing and emerging industries. This is recommended at the state level by “Unleashing the Potential” and in Washington County by David Flanagan’s “Economy Development Strategy” report. It is also based on the Department of Labor’s findings about the mismatch between the skill sets of workers and job opportunities within the state. SCEC is currently working with WCCC to identify emerging careers
8. Use technology to streamline educational infrastructure, reduce costs, and improve access, and improve connectivity within the county and beyond, as recommended by the Washington County Economic Development Alliance and “Unleashing the Potential.” UMM currently offers three online degree programs, and more could be done in this area.
9. Expand entrepreneurial training to support the traditional role that micro-enterprise has played in the local economy. This recommendation came from the review committee.
10. Expand the use of prior learning assessments to recognize informal knowledge and skill development that is built through participation in the local economy and the strong work ethic inherent in the region, especially in micro-enterprise-type work. This recommendation came from the review committee.

Introduction

Washington County offers its residents valuable amenities such as natural beauty and a small-town lifestyle. Yet the poor economic conditions and skills gap in the workforce make it increasingly difficult for its residents to make ends meet. Washington County's challenges are not unique and in fact are shared by much of the rest of Maine and by many rural areas throughout the country. However, the extent and combination of these difficulties poses a significant challenge for the County.

There have been a number of studies and reports in recent years by a variety of organizations that have explored the challenges of improving educational attainment and its implications on economic development in Washington County. This report summarizes the key findings and recommendations from the past studies and highlights common themes and strategies. When possible, the report also shares what resulted from these recommendations. In preparing this report, MDF and SCEC have drawn from the findings of Making Maine Work, a 2010 report that summarized the top issues facing Maine identified in other research and by business leaders through surveys, interviews, and previous reports. Bonnie Fortini of Machias Community and Adult Education and Susan Corbett of Axiom Technologies also served on a review committee with MDF, SCEC, and MaineCF that provided additional recommendations included in this report.

Economic Changes

Washington County's amenities include vast natural resources, a unique history and culture, access to the Atlantic Ocean, and its proximity to New Brunswick, Canada (Flanagan, "Economic Development Strategy Report"). Traditionally, its economy was built on natural resources, such as lobster, herring, lumber, and wild blueberries; adding value to those resources has become an important part of the equation in recent years. It has been and continues to be common for residents to hold multiple jobs that may change with the seasons to help make ends meet. The county is very rural: in 1990, 91% of the population lived in rural (fewer than 2,500 people) areas, compared to a state average of 55%. Most of the population resides along the coast or slightly inland (Margaret Chase Smith Center).

The past few decades have seen dramatic changes as the nation's economy transitions from manufacturing-centered to a knowledge- and service-based economy. The change has been more dramatic in Maine; from 1900 to 1950, "Maine's economic base was predominantly in the traditional, labor-intensive, and, to a large extent, natural resource-based, manufacturing sectors." ("Unleashing the Potential", MDF, p. 20). Manufacturing accounted for roughly half of Maine's employment in the 1940s, but only 17% in 1990 and just over 9% in 2008. Manufacturing employment dropped by nearly 50% in Maine compared to 25% in the U.S. over the past 50 years. These manufacturing jobs typically offered higher wages and better benefits than existing service sector jobs (MDF, "Unleashing the Potential").

Maine's rural areas have felt the largest impact. For example, a previous Department of Labor report found that manufacturing jobs in Washington County dropped from 1,666 in 2001 to 1,289 in 2006 as "The industrial base of the region continues shifting from one predominated by goods-producing industries to one based on service-producing industries." (Department of Labor, "Domtar Report", p. 5). Businesses in the fishing, apparel, lumber, wood products and, to a lesser extent, textile sectors have closed. While there is currently more demand for managerial, professional, and technical workers, displaced workers frequently lack the appropriate skills for full-time positions with quality benefits in these sectors (Department of Labor, "Domtar Report").

Jobs, particularly in the service sector, are becoming more concentrated in Maine's urban areas. From 2000 to 2009, Maine's metro areas gained 7,900 jobs; however, rural areas lost 16,400, giving the state a net loss of 8,500 jobs. The Department of Labor ("Trends and Issues", p. 21) concludes that "Currently, there are mismatches between the skills of people who are out of work and the skills needed by employers ... There is also a geographic mismatch as the growing services sector centralizes in the urban areas while rural areas experience a continued erosion of jobs." Statewide, data shows there are not enough workers to fill available health care and information technology positions, while there is a surplus of workers in the manufacturing and construction industries, the typical mainstays of Washington County's economy. This trend is expected to continue until 2018 (Department of Labor, "Trends and Issues").

Attraction and Retention

Washington County was one of only two Maine counties that lost population from 2009-2010. Also, in 2008, Washington County had the lowest percentage of working age (18 – 64 years) adults among Maine's counties, and the second highest population of age 65 and older (United Way of Eastern Maine, "2001 Needs Assessment"). Overall, Maine is losing its young people, and this trend has implications on economic and community development, especially in rural regions like Washington County. Young people help to drive a region's economy by replacing aging members of the workforce and providing vital talent, energy, and entrepreneurship. Socially and culturally, they provide vibrancy and help support local civic institutions. The state's youth population (defined as those between ages 15 and 29) has declined in recent decades due to a low birth rate, more out-migration, and less in-migration. The smaller supply of labor, particularly at the entry level, may deter new investment and stifle economic growth. Heminway's report "Maine's Disappearing Youth" (p. 5) notes, "Workers go where pay is best, and firms locate where the return on their investment is highest."

Young people typically leave for higher education and better jobs, and the problem is more pronounced in rural regions like Washington County with fewer job prospects and lower income levels. Studies have found that a region's lower levels of educational attainment, lack of access to higher education, lower levels of civic participation, and less effective local government and institutions can all impact youth migration. However, strong family and community connections can influence young people to stay in or return to the area in which they grew up; young people in Washington County, therefore, may have to choose between land and family versus educational or career opportunities (Heminway, "Maine's Disappearing Youth").

Studies have also shown that highly educated and upper-middle class young people are the most likely to leave a rural area. Rural areas may develop an underlying cultural expectation that encourages young people to leave, giving the impression the community's future is moving away and lowering the educational aspirations of the youth who remain. Middle-class children who leave a rural area may hold a strong affinity to it, but working-class youth who stay can develop a negative view (Heminway, "Maine's Disappearing Youth"). A report from the Margaret Chase Smith Center at the University of Maine hypothesized that there may be a mindset in Washington County that encourages the most talented individuals to leave and a culture that does not inspire pride in local history or available opportunities.

This attitude may be furthered by a fear that those who go on to college may not return and past studies on youth migration have found that statistics affirm this. In 1998, 43.4% of Maine's 19 year olds went to college, and of those, 43.5% went to college out of state. National numbers show that students

attending college out of state are 54% more likely to live out of state five years after graduation than in-state students, and that half of all rural college students who leave home do not return by age 25 (Heminway, “Maine’s Disappearing Youth”).

Young people leaving an area also affects school enrollment. Maine Department of Education data shows that Washington County’s public K-12 enrollment dropped from 6,239 in 1995 to 5,446 in 2000 and 4,456 in 2010. Declining school enrollment, Essential Programs and Services requirements, the values of the communities involved, and program and service offerings at each school system make public education more expensive than in most other areas. The Economic Development Strategy Report by David Flanagan found Washington County’s K-12 system lagged behind the state in educational attainment, even as the county’s average per student expenditure was well above the state average.

Economic Indicators

The table below compares Washington County to Maine on certain economic indicators. A 2011 United Way of Eastern Maine needs assessment (p. 3) found that “Basic needs and job security are concerns in all areas of the state, but especially in the outlying counties of Washington, Waldo and Piscataquis.” This makes planning for the future difficult.

Total jobs located in Washington County dropped from 12,075 in 2000 to 11,100 in 2006, the lowest level of the decade. Washington County also has comparatively few full-time jobs, with many employees in part-time, seasonal, or on-call jobs, or holding multiple jobs (Department of Labor, “Domtar Report”). Transfer payment income also grew at a faster rate (87%) from 2000 to 2009 than did total personal income (40%) (Maine Department of Labor, “Demographic Profile”). Transfer payments are payments to individuals for which no current services are performed, such as Social Security, unemployment, and welfare assistance.

	Washington County	Maine
Poverty rate – 2009*	20.5%	12.4%
Per capita personal income – 2008*	\$29,464	\$40,166
Median household income – 2009*	\$33,614	\$46,428
Transfer payments as percentage of income, 2009*	38.6%	20.3%
Percent of population with high school diploma or equivalent (2008)*	39.7%	35.2%
Percent of population with an associate’s degree or higher (2008)*	25.8%	35.3%
Unemployment rate – 2011*	12.2%	7.9%
Percent of households receiving LIHEAP assistance (2008-09)**	22.3%	11.2%
Children living in poverty (2009)**	29.0%	17.5%
Children receiving TANF (2010)**	9.4%	8.9%
Percent of students receiving subsidized school lunches (2010-11 school year) **	61.5%	44.2%
* Source: Maine Department of Labor Demographic and Workforce Profile		
**Source: United Way of Eastern Maine Needs Assessment		

Growing Skills Gap

Young people and those with a higher education may be compelled to leave Washington County due to the lack of quality jobs and high unemployment. The jobs that are available in the service and natural resource sectors tend to be low-paying and do not tend to emphasize a need for education. A lack of employers locating in the area is another obstacle to educational attainment: there is a lack of jobs, yet the lack of a well-trained workforce makes it difficult to attract employers (Washington County Education and Economic Development Alliance). A shortage of skilled workers means that economic growth and prospects are slowed, even as, “This skills gap also means Mainers are seeing thousands of good jobs pass them by.” (Governor’s Community College Advisory Council, “Jobs and Opportunity”, p. 9).

Washington County’s traditional industries typically required less formal training than in other areas, and higher skills could often be picked up through on-the-job training (Flanagan, “Economic Development Strategy Report”). For example, in 1996, 12.7% of Washington County’s jobs were in industries that traditionally did not require a post-secondary education (agriculture, forestry, and fishing sectors), compared to a state average of 3.5% (Margaret Chase Smith Center, “Demographic and Economic Characteristics”). To the extent that they have existed and currently exist, “The larger number of employment opportunities in these sectors may dissuade Washington County high school graduates from furthering their education if they decide to continue living in the county.” (Margaret Chase Smith Center, “Demographic and Economic Characteristics”, p. 12).

Changes in the national, state, and local economy are demanding a higher skill set and higher educational levels of employees. Emerging managerial, professional, and technical occupations generally require some form of higher education or training (Department of Labor, “Trends and Issues”). Additionally, traditional industries such as construction, boat building, heating, and plumbing have become more complex and require a higher skill level than in the past (Governor’s Community College Advisory Council, “Jobs and Opportunity”). The Maine Department of Labor (“Trends and Issues, Preface”) concluded that “Across the spectrum of Maine workplaces, more is being demanded of workers in terms of knowledge, skills, and abilities required for job performance.” Although previous generations of Mainers were able to find well-paying jobs without a large amount of formal training, such skills are now essential to Maine’s workers.

Educational attainment is inextricably tied to financial success in today’s economy, as “From diploma to trade certificate to college degree, each new level of education and training raises wages and reduces unemployment.” (Maine Coalition, “Prepare Maine”, p. 2). MDF’s “Unleashing the Potential” (p. 52) concluded that “Education is the single most important investment that can be made to ensure successful participation in the new, knowledge-based economy, earnings growth, and improved health status. Post-secondary education/training is critical to increasing productivity, income, and career advancement.”

Due to demographic trends, it is estimated that statewide, 80% of those workers who will make up the workforce in a decade are already on the job. Expected future labor shortages and the fact that the skills of many current workers are not suited to today’s economy make it vitally important to train current workers to meet the existing and future needs of Maine employers (Unleashing the Potential).

Foundations for Success

Studies have found that a positive environment during early childhood development is critical to

future success. Studies have also shown that families living in poverty confront problems which can create stress in the home that can negatively influence childhood development. Conversely, the Maine Children's Alliance's "Maine Kids Count" (p. 11) concludes that "A stable, nurturing and enriching environment in a child's early years helps to create a strong foundation for achievement in school, employment opportunities, and responsible citizenship." For example, "Children from low-income families (less than 200% FPL) tend to have worse outcomes in school than their peers who come from families with greater resources." (Maine Children's Alliance, "Maine Kids Count", p. 10), and students from families with higher incomes typically outperform those from low-income families by 20-25% in third and eighth grades. There is also a correlation between childhood poverty and lower high school graduation rates, overall health and wellness, and future employment. Research has shown that investing in quality early childhood programs that promote a child's cognitive, physical, social, and emotional development is a cost-effective way to prepare children for the future. Unfortunately, Washington County's economic conditions can create challenges for families in providing a supportive environment for positive childhood development.

Obstacles to Higher Education

The Mitchell Institute ("Barriers to Postsecondary Education in Maine", 2002) identifies a number of barriers to higher education for young people: parents who did not attend college, are not actively involved in their child's schooling or planning for the future, have limited financial resources, or are not saving for college; a community that has low educational expectations, that attaches little value to a college degree, or views college as unaffordable; and students not being in the top high school academic track. Some of these family and community influences are particularly important in Washington County. The Mitchell Institute ("Barriers to Postsecondary Education in Maine", 2002) also found that the value of a college education is less highly regarded in Washington County than in other areas of the state.

Institutional Assets

The University of Maine at Machias (UMM) is Washington County's only four year bachelor's degree school. UMM has over 700 full-time students and 160 total employees and is a major employer and influence in Washington County. Among its student body, UMM has a high percentage of non-traditional students who commute, hold jobs, and are parents. In recent years, UMM has broadened its curricular offerings to include more classes and seminars that link the traditional liberal arts to issues of environmental and community sustainability. Providing local access to higher education has been a priority.

UMM's actual cost per student is about \$3,500 more than the student tuition. Declining enrollment in recent years has resulted in operating deficits that have been covered by the University of Maine system. According to U.S. News & World Report, UMM's average freshman retention rate is 71%, and its 4-year graduation rate is 19%. This reflects in part students transferring to other institutions.

Washington County Community College (WCCC), located in Calais, offers one year certificates, two year associate degrees, and has a matriculation agreement with UMM to allow their two year students to transfer directly into UMM's bachelor program. WCCC has approximately 400 students. Specialties include heavy vehicle maintenance and construction trades, adventure recreation, marine technology,

early childhood education, health care preparation, and boat building. Like UMM, WCCC is challenged with a declining population, costs per student double the system average, and pressure to downsize.

Statewide, Maine’s community colleges have become “... a starting place for those who have historically not gone on to college but now view higher education as a necessity and a vital source of skilled workers for Maine’s evolving industries.” (Governor’s Community College Advisory Council, “Jobs and Opportunity”, Executive Summary, p. ii). Community colleges primarily serve people of low or moderate incomes, and 96% of community college students entering the workforce find jobs in Maine. More than two-thirds of the system’s students are enrolled in career and technical programs, designed to meet the specific needs of local and regional economies and the state’s overall economy. Given that students who attend college out of state are less likely to return to a rural area, WCCC and UMM may be of particular importance to the region. According to Education Database Online, WCCC’s overall graduation rate is 57%.

The Boat School, a small program located on ocean front property in Eastport, was run by WCCC from 1969 through 2007. Enrollment was typically less than twenty, due to declining interest among local youth in what they see as an old-fashioned industry and the lack of opportunities in the industry locally (many boat builders are located in midcoast and southern Maine). However, the industry is expected to expand, increasing the demand for skilled labor (Flanagan, “Economic Development Strategy Report”). In 2007, the city began leasing the Boat School to Husson University. Once that lease expired, the City weighed different options sold the facility to Perry Marine and Construction, which plans to use part of the facility to handle tidal turbine work for Ocean Renewable Power Company and to give another part to The Friends of the Boat School, which plans to continue operating the school (Mainebiz, “Eastport finds new Boat School owner”).

Cobscook Community Learning Center (CCLC) is a community-based organization that addresses local learning and creates new visions of what education is and how it is done. CCLC programs seek to engage community members across all ages and supplement, enrich, or replace traditional school systems. For example, the Community Year provides an alternative, credit bearing high school option for students and the Passages Program provides an alternative high school program for pregnant and parenting teens. CCLC and programs like this nationally have found success based on the idea that community and educational issues are interwoven, and in rural areas, grassroots education initiatives can help to bring a renewed focus to a variety of rural issues. Particularly in rural areas threatened with school consolidation, such programs can serve as educational and cultural centers for community life. They are more flexible than the traditional educational system.

Past Reports and Initiatives: Key Findings and Strategies

The following is a brief summary of the major findings and recommendations from past efforts addressing workforce development, education, and economic development in Washington County.

SCEC’s Economic Futures Project, conducted from 2001 to 2005, offers insights into the aspirations and future plans of Washington County’s high school graduates based on their responses to questions about their future. Over the five years of the survey, on average, 23% of those surveyed intended to work after graduation, while two-thirds planned to go to college (34% to a two-year college and 60% to a four-year college). 37% of those students planning to attend a two-year college intended to remain in the area, compared to only 12% of those planning to attend a four-year college.

Young people intend to leave the area for a variety of reasons; 18% for a lack of jobs, 19% for a lack of things to do, 13% because the area is too isolated, 19% for better educational opportunities elsewhere, and 17% for greater independence. Family is the primary reason that young people intend to remain in the area (27%). Of those intending to leave for college or the military, only 16% intended to return to the area afterward, while 38% did not, and 40% did not know. Those not planning to return were asked if they would if jobs were available or if they had help with student loans; in both cases, 37% said they would return, and 24% said they would not.

Of the graduates surveyed, 44% are interested in owning a business someday, while 30% are not interested. Of those interested in owning a business, only 29% said they would open that business in the area; 41% said they would not locate in the area and 30% did not know. A majority (56%) of the graduates believe that high school did a good job preparing them for the future, while 21% do not and 23% do not know.

The project concluded that many young people intend to leave the area, particularly those seeking an advanced education. Although leaving the area can broaden a young person's perspective, helping both the individual and the region when they come home, many young people assume they will not be able to find work in their chosen field if they return to Washington County. The SCEC recommends improving young peoples' awareness of the opportunities available to them and their appreciation of the benefits of living in a rural area.

The Coalition for Educational Excellence's Prepare Maine Initiative lists seven core priorities to improve education within the state: quality early learning experiences; high standards and personalized learning opportunities; effective, knowledgeable, and well-trained teachers; engaged parents, families, and communities; expanded access to and support for college and workforce training; collection of analysis and reliable data; and, efficient and equitable investment of educational resources.

The Washington County Education and Economic Development Alliance's vision was that "Washington County's stable and growing economy will be supported by a seamless system of education, career development, and employment." (p. 12). The Alliance recognized the need for workers to upgrade their skills and focused on "learners of all ages and their educational attainment levels, particularly non-college bound students, the unemployed, and current employees who need to upgrade their skills in order to hold onto or advance in their jobs." (p. 3). The short-term goal was to enhance existing vocational and technical training to prepare people for jobs now, with a long-term emphasis on developing new programs geared toward future economic trends. Bringing economic development, business, education, and workforce partners together at a regional level was a key part of the strategy, as was the use of technology to make the delivery of programs more efficient and expand access.

The Alliance reported that existing programs were largely disconnected; there was no mechanism for sharing information, resources, and clients; resources were only available in certain areas; the county had no central curriculum development; there was no central training or vocational facility able to attract students; and, there was a need to support and retain educators. A number of improvements were recommended, focused on: coordinating and connecting existing programs and resources; strengthening existing efforts; offering new programs integrated at K-adult levels; increasing the interaction between businesses and schools; improving program delivery, and; ensuring adequate space and facilities for education and training.

The Alliance divided into work groups on specific topics, including Career Preparation/Adult Education, Educator Development, Emerging Fields, and Vocational Education. Each work group issued a final report in May 2003. The following is a brief summary of the major findings.

The Career Preparation/Adult Education work group decided to support effective adult career preparation programs already in existence; to expand the adult education program; and to help increase awareness of existing programs and help them expand. The work group identified a number of objectives relating to increased awareness of opportunities for school age children and adults. Improved communication through website development and education of school personal was identified as a priority, and training was offered to expand knowledge and awareness of this resource in schools.

The Educator Development work group identified strategies to encourage and enable educators to further their education and skill development. Recommendations included a listing of institutions offering advanced degrees; establishment of a comprehensive, coordinated approach to professional development; strategies to attract and retain educators; countywide curriculum coordinators; greater interaction among the educational and political sectors; and, expanded distance learning infrastructure.

The Emerging Fields work group identified health care, biotechnology, and entrepreneurship as areas of future opportunity. Their action steps included working with local schools to expand awareness of health care opportunities; sponsoring pilot entrepreneurship programs in schools; partnering with the Jackson Laboratory; improving educators' awareness of job opportunities by providing continuing education credits for them to take a short-term job with a local employer; offering curriculum choices of interest to local students; and providing a list of local entrepreneurs to educators.

The Vocational Education work group found that approximately 10% of Washington County high school students participated in vocational programs. The low participation was attributed to a lack of viable options, facilities, and equipment, and a poor perception of vocational students among other students and school personnel. Recommendations focused on streamlining the administration of vocational programs, increasing student interest, capitalizing on opportunities for distance learning, supporting a new unified facility, and adopting a unified schedule to facilitate the sharing of facilities. The work group recommended that each school should complete a Vocational Needs Assessment and noted that Washington County Technical College (as it was then named) was willing to work with schools to promote post-secondary vocational education.

The Washington County Economic Development Task Force identified energy production (wind, tidal, or co-generation), lobster processing, and aquaculture as potential growth industries. The Task Force recommended protecting the "Education Triangle" of UMM, WCCC, and the Unobskey School (which has since closed) from budget cuts and encouraged additional cooperation among the schools and marketing. Early college programs and scholarships for Washington County students were also recommended. The Unobskey School, a small facility that offered interactive and online courses but no longer exists, used to be able to offer an Osher scholarship for "Maine residents who have never completed a college course and register through University College" for up to \$500 towards one class. According to the former director, 95% of Osher students completed their course and 50% went on to enroll in college (SCEC).

The Task Force recommended the establishment of a Masters Degree in Education at UMM and a scholarship program for Washington County teachers; a secondary vocational center in Jonesboro; continuation of SCEC's Adult Learner Scholarship (which targets part time, non-traditional students in

the workforce); and continued funding for Washington Hancock Community Agency's Incubator Without Walls to assist microenterprise development.

The Demographic and Economic Characteristics of Washington County, Maine, by the Margaret Chase Smith Center provides a brief summary of Washington County's history and demographics, its economic structure, and policy initiatives to stimulate the economy. The report (p. 51) offers a provocative observation on the future of Washington County: "The relative stagnation of natural resource industries in Washington County and much of northern Maine raises two questions: 1) How much effort should be invested in industries that show little prospect for growth? 2) What is the return of scarce economic development investment dollars in these industries versus other activities?"

The report also emphasizes the importance of targeting basic industries. Basic economic activity derives from a region's exports; in Washington County, these are primarily from the forestry, agricultural, and fishing industries. They also include expenditures in the region by non-residents, such as hotel accommodations, summer residences, retail spending by tourists, and retirement communities. This basic economic activity, in turn, encourages a variety of non-basic activities, such as retail stores, restaurants, hospitals, and schools. The report (p. 42) finds that:

"Non-basic activity fundamentally depends upon basic activity, not the other way around. Given that income from work in Washington County fell between 1990 and 1996, it is important that economic development strategies for Washington County primarily target those areas that are basic or export in nature. These strategies should encourage the growth of non-basic economic activity and the resulting employment and income that follows."

The report (p. 50) also notes:

"Educational attainment is an important long-term economic development issue for Washington County. This is because education and income are positively correlated. None of the economic development documents we reviewed for Washington County discussed an initiative directly responding to low educational attainment in Washington County ... Educational attainment needs more attention, given the importance of human capital for job recruitment and retention in our increasingly information-oriented economy, educational attainment."

Unleashing the Potential, authored by the Maine Development Foundation in partnership with the Maine State Chamber of Commerce in 2010, concluded (p. 53) that "Education is a critical investment in Maine people and in our economy and must be treated as such, through a coordinated approach from start to finish, or it will continue to be a series of competing and ballooning costs that fall short of delivering the desired outcomes." Recommendations are to invest in early childhood, improve delivery of services at the K-12 level, make higher education affordable to residents, align curriculum and training with industry needs and trends, and appeal to both traditional and non-traditional students in the incumbent workforce.

The United Way of Eastern Maine's 2011 Needs Assessment identified lack of communication among assistance agencies and delivery of services as a concern. For example, the Needs Assessment (p. 10) found that "Recent closures of area mills and other businesses have left many individuals who lack marketable job skills in computers or other technologies out of work ... While training and other resources may be available, many do not know how to find them." Additionally, workers may not appreciate the importance of updating their skill set. For example, according to SCEC, the Washington

County Transition Team (consisting of Career Center, education, political, economic development, and business representatives) worked closely with Domtar mill employees who were laid off. Some of them took advantage of education and retraining opportunities, but many chose to wait in the hope that mill jobs would return.

The Report on an Economic Development Strategy for Washington County recommends energy and clean energy as potential growth industries. The report (p. 57) identifies the University of Maine at Machias as particularly important, stating that “There is no better institution available in Washington County around which a true economic development initiative could coalesce and out of which the skills and attractions and leadership Washington County needs could emerge ... Higher education is the backbone of Maine’s future economy, and UMM must be the backbone of the future of Washington County.”

The Mitchell Institute’s From High School to College: Removing Barriers for Maine Students’ recommendations focus on improving students’ experience in high school to encourage them to further their education; generating greater community support for higher education; and addressing the financial issues associated with higher education. Among the specific recommendations are helping parents and students to understand the importance of career planning, encouraging local business leaders to act as mentors, making planning for college easier and providing financial aid, and expanded outreach by higher education institutions.

A comprehensive vocational high school has been proposed in the past for western Washington County, to be built in Jonesboro. A \$1 million bond was approved by voters for planning and start-up costs, and, according to Representative Dianne Tilton, the Department of Education was committed to funding the construction. The effort was led by Machias with participation from School Administrative District 37. The partnership ultimately dissolved over philosophical differences after the state passed the school reorganization law.

Findings

While Washington County's challenges are shared to some extent by the rest of Maine and other rural areas, they nevertheless create difficulties in moving the county's economy forward. These challenges, however, are not insurmountable. There are certain key recurring themes that emerge from the extensive literature available on Washington County and its economic and workforce development and educational structure.

Key Challenges Facing the Region:

1. Washington County's economy offers fewer full-time employment opportunities than other areas of the state; residents often engage in seasonal, project-oriented, and part time work, and informal transactions, to make ends meet
2. Washington County's level of formal higher degree attainment trails the state average
3. Washington County's traditional natural resource- and manufacturing-based industries have declined and are expected to continue to do so
4. The incumbent workforce's skill set and level of educational attainment is geared toward these industries and is not a good fit for existing and emerging opportunities in potential growth industries (health care, wind and tidal energy, advanced manufacturing)
5. As a result of this and Washington County's relatively small workforce, it is difficult for businesses to find workers, which may be a deterrent to businesses remaining in or moving to the region
6. Many residents in Washington County are struggling to meet day-to-day needs, which makes planning for the future difficult
7. Many young people, particularly those with higher levels of education and skills, are unable to find careers in their fields, making attraction and retention difficult
8. Declining school enrollment poses challenges for educational institutions

Areas of Opportunity:

1. Improve the quality and expand the availability of early childhood development offerings, and emphasize its importance to future educational achievement. "Unleashing the Potential", "Maine Kids Count 2010" and "Prepare Maine" suggest this as a general course of action for the state as a whole. Examples include Head Start and the Community Caring Collaborative
2. Expand existing efforts to increase college readiness, expose high school students to the college experience, and assist with college planning. The Washington County Economic Development Task Force and the Mitchell Institute's research highlight the importance of these programs. Early college programs at the University of Maine at Machias (UMM) and Washington County Community College (WCCC) have helped reduce the need for developmental courses among entering college students.
3. Provide additional financial assistance and financial planning for higher education to address the concerns about financial resources cited by the Mitchell Institute and the economic indicators listed above. This is also recommended by the Washington County Economic Development Task Force.
4. Reinforce the value of educational attainment and skill development at all age levels. This is suggested directly by the Washington County Education and Economic Development Alliance and is also based on the Mitchell Institute's findings in "Barriers to Higher Education" and the Department of Labor's findings regarding the importance of skill development and educational attainment. An

example is SCEC's Young Adult Scholarship Program, which provides scholarships to young adults of low to moderate income for training and certification programs that increase their opportunities for immediate employment or job advancement. Cobscook Community Learning Center is another example of work in this area.

5. Increase higher education opportunities for adults by adequately funding and marketing adult education programs. This also comes from the Washington County Education and Economic Development Alliance and builds on the Department of Labor's findings. Currently, state funding is provided for Calais, Machias, and Narraguagas. Efforts should be made to increase accessibility and create a "critical mass" in the eastern portion of the county.
6. Help to raise the aspirations of students and members of the workforce by informing them of the job opportunities that higher levels of education and training make available to them. This suggestion is based on the findings of the Mitchell Institute's "Barriers to Higher Education" and the Washington County Education and Economic Development Alliance. Maine Centers for Women, Work and Community's Totally Trades program is designed to encourage girls to consider traditionally male-dominated career fields. Career Center and JMG job fairs are other examples.
7. Ensure educational programming at all levels is relevant to Washington County and its existing and emerging industries. This is recommended at the state level by "Unleashing the Potential" and in Washington County by David Flanagan's report. It is also based on the Department of Labor's findings about the mismatch between the skill sets of workers and job opportunities within the state. SCEC is currently working with WCCC to identify emerging careers
8. Use technology to streamline educational infrastructure, reduce costs, and improve access, and improve connectivity within the county and beyond, as recommended by the "Washington County Economic Development Alliance" and "Unleashing the Potential." UMM currently offers three online degree programs, and more could be done in this area.
9. Expand entrepreneurial training to support the traditional role that micro-enterprise has played in the local economy. This recommendation came from the review committee.
10. Expand the use of prior learning assessments to recognize informal knowledge and skill development that is built through participation in the local economy and the strong work ethic inherent in the region, especially in micro-enterprise-type work. This recommendation came from the review committee.

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