

DRAFT

April 14, 2006

U.S. Department of Education
Office of Vocational and Adult Education
Attn: Mr. Maurice James, Chief, SAB
400 Maryland Avenue, SW
Washington, DC 20202-7110

Dear Mr. James:

The eligible agency of Maine requests an extension for Program Year 2006-2007 of its State plan approved pursuant to the Carl D. Perkins Vocational and Technical Education Act of 1998.

As requested, please find enclosed:

- Revisions that update the state plan to reflect changes in conditions in the state as well as the implementation of NCLB;
- A budget for the year beginning July 1, 2006; and
- Proposed performance levels for the year beginning July 1, 2006, on which the state must reach agreement with your office.

Please feel free to contact me for any additional information.

Sincerely,

James Carignan, Chair
State Board of Education

Enclosures

DRAFT

CAREER AND TECHNICAL EDUCATION--BUILDING A WORKFORCE FOR MAINE'S FUTURE

INTRODUCTION

Maine creates a new vision for Career and Technical Education

The changes in state and federal regulations regarding accountability for student achievement, the emergence of the community college system, the laptop program and its implications for Career and Technical Education (CTE), high school reform efforts in Maine such as Promising Futures, postsecondary attainment symbolized by the Compact for Higher Education, regionalization efforts and the challenges of a technology-based economy have given Maine the opportunity to create a new vision for CTE.

While more demands are being placed on schools to meet the Maine Learning Results and the accountability standards of No Child Left Behind, Maine schools must continue to provide a wide array of learning opportunities that expand options for students, including CTE. It is the state's responsibility to ensure that all students achieve the Learning Results and it is important that it is done in the manner by which they learn best. It is critical that CTE develops a vision and a plan that capitalizes on the new initiatives and incorporates them with its own effective practices.

To that end, Maine's Commissioner of Education, Susan Gendron, established a State Advisory Committee for Career and Technical Education in the spring of 2004. Deputy Commissioner Patrick Phillips and Mid-Coast Center of Technology Director Tim Hathorne co-chaired the committee comprised of representatives of a broad array of stakeholder groups. This committee oversaw the creation of a new vision for CTE and made recommendations regarding the implementation of that new vision.

As part of the effort Dr. Willard Daggett, President, International Center for Leadership in Education, was the keynote speaker in the first session of a three day facilitated visioning process involving 80 stakeholders from the groups represented on the State Advisory Committee. This meeting was followed up by a one-day re-convening of the same 80 people for a review and critique of the draft report. Several meetings of the State Advisory Committee were held through November of 2004 to refine the report and incorporate the feedback from the individual stakeholder groups. (The stakeholder groups consisted of academic and CTE professionals, secondary and postsecondary educators, parents, business people and students as well as policy makers.)

The State Advisory Committee was responsible for planning and overseeing the visioning process as well as for developing recommendations from those stakeholder meetings. The stakeholder meetings were held in June and September of 2004, recommendations were sent to the Commissioner in December 2004, and the plan was approved by the State

Board of Education in February of 2005. This visioning process will be considered part of the public hearing series leading to a new state plan for Career and Technical Education.

The next step in the process was the expansion of the State Advisory Committee for the purpose of developing a detailed implementation plan using the five vision areas and the strategies and action steps identified in the strategic plan as the foundation. The recommendations for implementation were sent to the Commissioner in July 2005.

Implementation is under way on the first set of strategies and action steps outlined in the first year's implementation plan. A continuous improvement process has been developed that will assure continued review of the implementation and completion of strategies and action steps as well as the development of new ones. (The Implementation Strategies for 2005-2006 are attached as Appendix A as is the Evaluation Plan.)

In December 2005 the Commissioner convened a group of stakeholders to engage them in a discussion of the use of the Perkins funds given the trends and implications for the Maine workforce, the findings and recommendations of the PK-16 Task Force, the CTE Strategic Plan, and the transformation of Maine High Schools.

The Stakeholder Group focused on prioritizing the use of funds and identified five categories on which Perkins funds should be expended based on the discussion of the topics listed above:

- Program Improvement
 - Integration of academics
 - Promotion of literacy
 - Skill standards development
 - Skill assessment development
- Support of Local Action Plans
- Support of early college programs—articulation, dual enrollment, career pathways
- Support of nontraditional programs/activities
- Support of entrepreneurship program development

The group members identified activities that they could engage in to move Maine's agenda forward. They also identified ways they could partner with others to maximize resources. Professional development was a theme that ran throughout the discussion. Group members expressed a need for clear direction, benchmarks to measure success and the need for any prioritization to be data driven.

This discussion and series of suggestions, coupled with Maine's initiatives in high school reform and the development of a seamless education system, are the basis for this plan revision and will form the foundation of future Perkins state plans. The state will be more prescriptive with regard to use of Perkins dollars in order to support these initiatives.

A. IMPROVING THE ACADEMIC SKILLS OF VOCATIONAL AND TECHNICAL STUDENTS

Maine will continue to hold its schools accountable for student outcomes

Maine's high schools offer students a range of articulated pathways into the high skills workforce through a variety of CTE program offerings. Every high school student from Kittery to Fort Kent has the opportunity to access CTE programs. Maine provides CTE through a network of twenty-six centers and regions across the state. Maine has 18 CTE centers and 8 CTE regions at the high school level that offer choices which provide a pathway to the labor force and also provide a pathway to postsecondary education. By offering a meaningful context for learning, CTE educators can help ensure that all students reach the high levels of achievement in both academic and technical content.

An especially important part of the CTE Visioning Conference in June 2004 was the participants' identification of the "positive core" of CTE – its qualities and attributes when CTE is at its best, the core strengths of CTE to build on in the future. The attributes, arranged under five categories, are as follows:

Applied Learning Model

- Integration of knowledge and application; translation into real life skills through hands-on, applied learning, reinforcing academic concepts
- Opportunities relevant to students' interests and aptitudes
- Natural links to academics and to business and industry

Industry/Career Pathway Standards

- Insures that technical skills and knowledge in programs are current and valid
- Universal acceptance of skill attainment and portability of credentials and credits
- Enables articulation with post-secondary programs

Student Engagement

- A voluntary alternative, accessible to all
- Student involvement in learning and teaching
- Love of learning, leading to lifelong learning
- Practicing work ethic in an adult environment
- Increased student confidence, self-esteem

A Committed Faculty

- Supported and inspired by its close ties to industry
- Passionate and knowledgeable
- Flexible – able to individualize learning for students

Relationships

- Teacher-student relationships are human, personal
- Students feel valued
- Small class size

The Applied Learning Model, with a focus on technical skill attainment and related concepts, lies at the heart of CTE. Applied learning is what allows CTE to have a positive impact on students, as it helps to ensure student engagement in the learning process and a close relationship with CTE faculty members.

Maine's population does not have the critical mass to offer CTE programs through comprehensive high schools and the region and center configuration allows for access for all students in the state. Given this structure, the sending schools or high schools in the state are the primary deliverer of the academic content and the CTE schools are the primary deliverer of the skill content. Maine recognizes the value and impact of contextual learning for student achievement and has been utilizing federal and state funds to strengthen its standards in both the academic and skill content of its CTE programs to:

1. create new skill standards (which are compatible with national skill standards) for every secondary CTE program in the state
3. develop seamless pathways from Maine's secondary CTE programs to the new community college and university programs
4. develop a statewide accountability system to measure the goals established by Perkins III
5. support professional development at the secondary and postsecondary levels
6. support adult education programs that prepare students for entry into the community colleges
7. promote nontraditional education in all CTE programs

Vision Area #2 of the CTE strategic plan, Integration, recommends expansion of contextual learning for all students. **Work has begun on** integrating academics and applied learning for all Maine students in accordance with the vision outlined in the CTE strategic plan: "All students benefit from an integrated system of academic and applied learning based on rigorous expectations and standards, throughout their school experience." The vision is that "all secondary learning institutions, including CTE and sending schools, encourage and support the integration of rigorous and relevant career, academic, interpersonal, technical and life skills with applied learning models in all aspects of the teaching and learning process, for all students at all grade levels. Thus we ensure the greatest probability of success in our students' personal and professional lives. In appreciation of each individual's strengths, interest, and limitations, our schools support all students in building social, academic, and technological literacies that will serve them throughout their lives." Both Federal and state funds **are being** used to encourage innovative models of integration.

Maine was a recipient of a National Governors Association (NGA) grant for high school reform. Some of those funds are being used to support the identification of best practices

for integrating academics and CTE, to support the teaching of literacy in the (CTE) content areas, to develop a mentoring model for CTE teachers, and to assist CTE and sending schools in the development of local action plans for integration.

Maine also will continue its support for the ancillary components of quality CTE education and will:

1. play a leadership role in the implementation of the Career Prep content area of the Maine Learning Results
2. continue to monitor equity and civil rights compliance in CTE programs
3. foster the infusion of state of the art technology in CTE programs
4. provide scholarships for disadvantaged students at the postsecondary level

When the Maine *Learning Results* were signed into law, there was a provision for their review beginning in 2004. That review is currently under way. **The revised content area standards will be posted to the department web site by March 1, 2006.** CTE directors and teachers are involved in this process. There are CTE representatives on the advisory committee and on all of the content area committees. There has been a concerted effort on the part of the Commissioner to insure broad scale involvement.

Coordination with the implementation of the No Child Left Behind Act

The Maine CTE team is part of the larger Federal Programs Services Team and meets **periodically** with the team leader and the members of the No Child Left Behind (NCLB) team to share information and coordinate services and activities where appropriate.

All Maine students are required to meet the Maine Learning Results (MLR), Maine's academic standards. This is the only set of academic standards in the state and CTE students are expected to master the same set of academic standards as non-CTE students. CTE students are also held to the same level of achievement under No Child Left Behind as the non-CTE students. Maine Learning Results are for ALL students, and ALL students are expected to achieve the same high standards of learning. The method by which they achieve those standards may vary. CTE students receive their primary academic preparation at their sending schools, and they are taught the same academic content as other students and are held to the same level of rigor.

Maine measures Adequate Yearly Progress for all high school students using the Maine Education Assessment scores in reading and math as well as high school graduation rates. There is no difference in expectations for CTE students and the CTE student scores are included with those of the other students.

All students in Maine have an option of a fifth year of high school as long as they have not reached age 21. This opportunity allows CTE students the option of completing high school in five years as opposed to four. It is provided for in the Maine Department of Education rules, Chapter 127 which states:

Section 7. *SECONDARY SCHOOL COURSE OF STUDY AND DIPLOMA
REQUIREMENTS*

7.01 *Secondary School Standards and Expectations for Learning*

A. *Curriculum Aligned with the Content Standards of the System of
Learning Results*

1). *Each school board operating a secondary school shall
adopt a curriculum aligned with the content standards of the
system of Learning Results. Each school administrative unit shall
determine the instructional methods and educational materials
needed to give each student the opportunity to meet the content
standards of the system of Learning Results. This may include an
extended school day or school year for students who need more
than the minimum time established in Me. Dept of Ed. Reg. 125 to
meet the content standards of the system of Learning Results.*

Maine has developed standardized tests to be administered by the Maine Department of Education to measure reading and math achievement levels for all Maine students in grades 3, 5, 6 and 7 to meet the requirements of NCLB. These are in addition to the assessments that Maine has developed to measure achievement of the Maine Learning Results. The new assessments have been benchmarked to Maine DOE-determined Grade Level Expectations (GLEs). The Maine Education Assessment Test will continue to be used for grades 4 and 8 **and all of Maine's 11th graders will be required to take the SAT beginning in April 2006.**

Maine will continue its support of the integration of academic and Career and Technical Education. Over the last six years Maine has developed state-of-the-art program standards for all of its career and technical programs at the high school level. They have been cross-walked to the Maine Learning Results and benchmarked to industry standards. Many of the secondary CTE programs are articulated to the community college programs.

New strategies or activities to ensure the CTE students are taught to the same challenging proficiencies as all other students.

Dr. Willard Dagget, President, International Center for Leadership in Education, has conducted studies on reading levels required by technical careers. His research has shown that entry-level technical workers must have higher reading lexiles than most white collar workers.

According to Dr. Daggett's research the text measures of entry-level occupational reading materials for thirteen CTE clusters for which there were adequate text samples are as follows:

Agriculture/Natural Resources	1270—1510L
Architecture/Construction	1210—1340L
Arts/AV Technology/Communications	1100—1190L
Business and Administration	1210—1310L
Education and Training	1320—1370L
Health Science	1260—1300L
Hospitality and Tourism	1230—1260L
Human Services	1050—1200L
Law and Public Safety	1420—1740L
Manufacturing	1200—1310L
Retail/Wholesale Sales & Service	1180—1270L
Scientific Research/Engineering	1190—1250L
Transportation, Distribution & Logistics	1170—1350L

Most high school CTE texts are lexiled at the 12th grade reading level, largely due to the complexity of the technical materials covered in those programs. Since most CTE students are not yet functioning at that level, Maine CTE schools will continue their work on contextual learning with an emphasis on reading and communication. This will enable CTE programs to prepare students for the workplaces of tomorrow as well as today.

Vision Area #3 of the CTE strategic plan identifies literacy as a critical area. Literacy **has been** the primary focus of the Curriculum Integration Project **for the past two** years and **will be** for the foreseeable future.

Vision Area #3--Literacy

All students and teachers place the highest priority on students' attainment of literacy at levels that will serve them throughout their lives as productive citizens and lifelong learners.

Vision:

We support all students in achieving the level of literacy (prose, documentary, and quantitative) they need to be successful in their chosen field(s) of study. Explicit instruction in general literacy strategies and those specific to the discipline is central to the pedagogy and curriculum of all courses. We recognize students' strengths and prior knowledge and engage them in creating meaning and applying higher-order thinking skills. We regularly assess students' levels of literacy and use them to guide further instruction and support. Students regularly apply literacy skills as they research areas of interest, learn new concepts and skills, and solve real problems.

As outlined in Maine's state plan, the Curriculum Integration Project that was begun seven years ago has been the vehicle by which the Maine Learning Results content area standards have been cross-walked with the CTE curricula in each of the program areas. This was a comprehensive review by the program instructors, facilitated by the University of Maine and the Maine Center for Career Development, of both the academic and skill content of each course using measurable objectives. The purpose of this activity was to:

- integrate the Maine Learning Results into individual program competencies to create a strong academic foundation
- validate student learning, document student achievement and encourage student self-assessment
- integrate CTE assessment into the state's Comprehensive Local Assessment System
- expand student options and validate choices
- assist instructors with objective assessment

There is still a great deal of work to be done in assessment development **but the Comprehensive Local Assessment System is currently on hold pending a redesign. In the interim** work is continuing on the alignment of the career and technical programs with the Maine Learning Results. This is occurring in the refinement of the academic performance indicators that CTE teachers are teaching and assessing.

Work also will begin this year on refining skill assessments. MAVEA and the CTE team have been convening groups of CTE content area teachers to discuss national standards and come to agreement on which national standards they are or will be teaching and how those standards will be assessed. These discussions include postsecondary instructors whenever possible. It is important to have postsecondary representation since most of the national standards are too comprehensive to be taught exclusively at the high school level. Once the standards are agreed upon, the decision will be made regarding skill assessment. Maine will determine which assessments are most appropriate for the high school level whether they be NOCTI, other national assessments or locally developed assessments. The New York model of using groups of teachers to design skill assessments has promise especially in content areas where no national assessments exist.

There have been discussions in the Maine Department of Education concerning the role that CTE schools will play in the totality of Maine Learning Results assessment and the relationship to graduation requirements. **These discussions will continue as the local assessment system is revised.**

The unique skills and professional development needs of CTE teachers have been recognized and supported. Maine has encouraged the formation of School-Based Learning Teams (SBLT's) for the purpose of providing professional development in the areas of curriculum, instruction and assessment to the teachers in all CTE schools. Small groups of teachers from CTE schools attend courses given by University of Maine faculty and then return to their schools to teach their peers--a type of train-the-trainer approach.

Career and Technical Education Team (CTET) consultants and consultants from the Center for Career Development, a unit of the Maine Community College System, continue to work with the CTE schools to accomplish these initiatives. Workshops were held in February and March of 2003 to develop a warranted list of MLR performance indicators. (A list of the academic content taught in each program area.) Additionally, workshops were held in June of 2003 where over 100 CTE teachers worked with CTET staff and academic teachers to develop assessments for those academic indicators on the

warranted list and also for the development of skill assessments in specific content areas. Samples of these assessments are available on the Curriculum Resource Center of Maine website for teachers to use as models.

Literacy has been a focus for the CTE schools for the past two years. In order to expand literacy activities to all CTE schools Maine has contracted with the Center for Resource Management, Inc. (CRM) to do two things:

1. “To identify, disseminate and support promising programs and approaches that are currently working in Maine CTE schools to improve literacy, rigor and relevance”

In the spring of 2006 the CRM consultants will investigate how six Maine CTE schools are implementing promising practices in academic integration, literacy integration, literacy coaching, remediation/acceleration, and professional development. Once these best practices are documented, they will be available on the www.schoolswork.org web site.

2. “To improve the capacity of Maine’s CTE teachers to integrate literacy support into their classroom experiences”

CRM will work with two teachers from fourteen CTE schools in each of seven CTE program areas (automotive technology, health occupations, early childhood, computer technology, metal trades, culinary arts, and building trades) to teach them literacy support strategies. CRM will support these teachers while they conduct workshops as mentors to their peers across the state. The mentoring activity will begin in the spring of 2006 and will be followed by a three-day workshop in the summer and a two-day session in the fall. The goal by the end of the 2006-2007 school year is to have at least one teacher in each CTE school who can act as a mentor to the others in his/her school.

Maine also has been selected as one of the states in the Successful Schools Network. One of Maine’s CTE schools is part of the group of schools with which the Center for International Leadership in Education is working. The technical assistance and materials that the CTE school will receive is not only beneficial to that school, but it is information that can be replicated by other CTE schools as the project moves forward.

Services to special populations

As stated in Maine’s state plan for vocational education, “Maine will continue to honor the **State Standards of Service to Students With Special Needs** originally developed in compliance with §118 of Perkins II and with the School-To-Work Opportunities Act.” The standards document sets forth a comprehensive set of measures of access and standards of service for students who are members of populations with special needs. These standards continue to be included in the **Planning Instructions for Local**

Applications for Assistance under Perkins III. The standards of service are grouped in the following areas and the document is included in the state plan:

- Equal Access
- Services for Students with Disabilities
- Services for Disadvantaged Students
- Services for Students Preparing for Nontraditional Training and Employment
- Planning, Monitoring and Evaluation

B. STRENGTHENING THE CONNECTION BETWEEN SECONDARY AND POSTSECONDARY EDUCATION

Maine will expand its pathways for access to postsecondary education

As the educational implications of the 21st Century economy become clearer, focus has sharpened on preparing all students for post-secondary education, which the vast majority of emerging careers will require. In fact studies and surveys have shown that the skills required for entry into postsecondary education are the same as entry into the workplace. As Marc Tucker, President, National Center for Education and the Economy, points out, “Low-skill jobs are disappearing at increasing speed. And the higher skill jobs that are proliferating require the very qualities that good educators have always valued: broad and deep knowledge, a critical mind, the capacity for autonomous and thoughtful behavior, the ability to relate productively to others, the ability to think well and the capacity to learn what one needs to learn when one needs to learn it.”

The Maine Legislature passed a bill entitled “An Act to Expand Access to Higher Education and Employment for Youth” in 2005. This bill, among other things, directs the Commissioner of Education and the State Board of Education to “prepare all high school students for postsecondary education.” They must create a plan with specific strategies ‘that will ensure that every high school student in the state has the opportunity to complete courses required for college entry.’ This bill is a complement to Governor Baldacci’s PK-16 initiative which called for the creation of a seamless, K-16 educational system. Such a system will enable students to move easily from secondary to postsecondary education without concern for transferability of credits. **This Task Force developed several recommendations with specific strategies and action steps. The report was released in 2005. Expansion of the early college program was one of the action steps mentioned in the report. The recommendations included graduating all students ready for college and empowering all students to earn a college degree.**

Commissioner Gendron has put forth a plan for an “integrated, seamless system of public education that guarantees that all students are prepared for college, careers and citizenship” and she has been carrying that message to every part of the state and in every forum in which she participates. In order for that message to be understood by all Maine citizens, the Commissioner has proposed several goals as part of Maine’s high school reform initiative. Goal 5 states: ***Develop and implement a statewide campaign to build broad stakeholder understanding and commitment in support of secondary and post-secondary***

educational alignment/reform in Maine, and support with web-based models and tools for public engagement.

Today more than ever CTE represents an important key to a productive and prosperous future, not just for those students heading to professional careers, but for the workforce and the Maine economy as a whole. (In five-year follow-ups of graduates of career and technical programs at the high school level, high percentages of students are working in a related field and/or are attending postsecondary institutions. In a survey completed in September of 2003, responding CTE schools reported that 56% of their students go on to postsecondary education. Most of those students graduate from those postsecondary institutions. For example, Lewiston Regional Technical Center reports that 52% of its graduates have completed college (27% two-year and 25% four-year degrees) and 72% are working full time in their related trade areas.)

Maine's CTE centers and regions, more and more, are becoming a feeder system to the community college system. There are many articulated courses offered through Tech Prep Maine and there are three ProPrep programs offered which are articulated starting at the high school level to the community college level and finally to the university level. Maine will increase the number of articulated programs which provide a seamless pathway to postsecondary education, especially for students who might not otherwise pursue postsecondary education. Tech Prep Maine has been the primary developer of secondary-postsecondary articulation agreements since its creation under Perkins II. Maine had 1,187 course-to-course articulation agreements as of June 2003 and added more in '04 and '05.

To add to the opportunities for students to access postsecondary education, Maine has begun piloting early college and dual enrollments. A dual enrollment pilot for Career and Technical Education has been implemented primarily by Central Maine Community College. Other community colleges are exploring the possibility of implementation. Dual enrollments are especially successful for students who never thought they had the capability of succeeding in a postsecondary environment. These students graduate from high school not only with a diploma, but also with three or more college credits. There is no better affirmation of their ability to do college level work.

It is critical that CTE move even more rapidly toward full articulation between secondary and postsecondary programs. All of the Tech Prep funds in this year's Perkins allocation will be dedicated to the development of additional early college, dual enrollment, articulation and career pathway programs between the CTE schools and the community colleges to facilitate expansion of these programs. The state CTE skill standards and warranted list of academic performance indicators make that easier to achieve.

The Maine Legislature created the Maine Community College System from the former Maine Technical College System. The Community College System is now aligned with the University of Maine System and there are multiple program articulations between the two systems making it easier for students at the community college level to access baccalaureate programs through the University. Often the students take entry-level courses through the community college and then transfer to the University for the

baccalaureate level courses. Since Maine's secondary CTE schools also have articulation agreements with the community colleges, more of those students are going on to postsecondary education, both two and four-year degree programs, and graduating. This has been a stepping stone to a stronger affiliation between the two systems and has set the stage for the new PK-16 initiative.

The emphasis in the economic development efforts of the state for several years has focused on the growth and prosperity of the small business sector since it is the backbone of the state's economy. The greatest demand for workers in Maine as well as in other states is for workers with associate degrees, especially in technical areas. Another component of the Legislature's *Act to Expand Access to Higher Education and Employment for Youth* is the directive to the Department of Economic and Community Development to administer an internship program for college students to work in technology-based businesses.

The current administration also has targeted the growth and support of entrepreneurs. Maine has many entrepreneurs but there has not been a coordinated effort to support and network these individuals to ensure their success. To that end, an Entrepreneurship Working Group (EWG) was formed a few years ago. It is a subcommittee of the Maine Small Business Advisory Council. The state, and the EWG in particular, worked with The Kauffman Foundation of Kansas City for a year to develop recommendations which, when implemented, would make Maine a more entrepreneurial state.

The EWG will continue to coordinate entrepreneurship across the full spectrum of state services from education to economic development to taxation and policy development. There are several subcommittees of the EWG, including a K-12 Education subcommittee which is comprised of representatives of the Maine Department of Education's CTE and adult education teams, the Maine Community College System and the University of Maine system. The Director of the Center for Entrepreneurship and Small Business at the University of Southern Maine School of Business and the State Director of Career and Technical Education co-chair the subcommittee.

The primary mission of the K-12 Education Subcommittee is the development of coordinated, articulated programming in entrepreneurship education K-adult. Work has begun on this articulated effort between the University of Southern Maine's School of Business and Southern Maine Community College. Courses have been identified at both institutions that could be candidates for inclusion in a certificate program in entrepreneurship. Both Southern Maine Community College and Central Maine Community College will work with high school CTE programs in developing that component for articulation. This will result in a broad range of access and opportunity for individuals at all levels of learning and of business development.

The program at Southern Maine Community College includes an Entrepreneurship Center and a business incubator for students who want to begin their businesses before they graduate from college. During the summer of 2004 the college ran a very successful in-service workshop for teachers K-12 who wanted to include entrepreneurship

components in their curricula. An entrepreneurship conference for teachers was held at SMCC in the summer of 2005. It was supported by a grant from the Kauffman Foundation. Schools sent teams of middle school and high school teachers who, as an outcome of the workshop, developed curriculum units that are articulated between the middle and high school levels.

C. PREPARING INDIVIDUALS FOR OCCUPATIONS IN DEMAND THAT PAY FAMILY-SUPPORTING WAGES

The economy of the future is a technology economy. Scientific and technological changes are rapidly transforming almost every dimension of human experience. The technical workforce is emerging as the core of this new economy. Technicians, technologists, journey workers and other high skills workers represent over 40% of the workforce, almost twice the percentage of traditional professional workers with baccalaureate degrees or higher. There is currently an acute labor shortage in Maine in information technology, health care, metal trades, construction and other industries. National labor market information has shown for the last fifteen years that 75-80% of the jobs require postsecondary education, but not at the baccalaureate degree level.

In a global marketplace Maine is no longer remote from markets and sources of supply. Its beautiful landscape is becoming an advantage, not a disability. Maine's standard of living will depend in large measure on high wage occupations in high performance work organizations, and Maine can and will compete for jobs and income around the world. Career and Technical Education programs at the high school as well as the community college level can play a key role in helping Maine build a world class workforce.

Maine Department of Labor statistics project that new jobs through the year 2010 will be created in retail trade, services and government. Since 1950 most of the job growth has been in white collar and service occupations, especially professional and technical sectors. This trend is expected to continue.

Demographic trends impact the rates of job growth and types of jobs needed. Maine Department of Labor data states that:

- A growing middle-age and elderly population will keep demand for health and retirement services rising.
- Demand for financial services will continue to rise as baby boomers increasingly focus on retirement planning.
- Growth in housing construction and the manufacture of furniture and other household items will be tempered by the declining number of young adults.
- Businesses will continue to pursue productivity gains through automation and more efficient work practices as a response to the decline in the number of young adults available to fill entry-level jobs.
- Geographic boundaries will continue to fall as consumers increasingly use the internet and other outlets to locate and purchase products and services.

- Continuing high rates of labor force participation among women will keep demand for child day care high.

Maine is still a very rural state and Maine's population is growing unevenly. The population is moving from the rural areas to the more populated areas of the state or out of the state altogether. The report, *Maine's Investment Imperative*, by former State Economist, Laurie Lachance states that the coastal counties are experiencing "red-hot growth". York County, Maine's southernmost county and the one closest to Boston, grew by 13.5% and five counties have experienced population declines with Maine's northernmost county, Aroostook, experiencing a 15% population loss through the last decade.

Maine's Investment Imperative goes on to state, "Maine has become a national leader in the area of telecommunications laying a strong foundation for the technology-driven economy." The report also quotes the November 1997 edition of *Maine Works*, "Telecommunications is the modern mode of transporting goods and services, and Maine's telecommunications infrastructure has placed the state in the center of the global marketplace." *Maine Works* highlights Maine's progress and lists the following accomplishments:

- 100% of Maine's telecommunications network is switched using digital technology, making it one of the first states in the nation with this distinction.
- Maine has the first statewide ATM (Asynchronous Transfer Mode) fiber optic based network, one of the most technologically advanced networks available today.
- 100% of Maine schools and libraries have Internet access.
- Maine State Government received kudos in January 2002 as Maine was awarded the distinction of being the 5th most digital state in the country, moving from 35th place in one year's time.
- Maine is one of the most nexus-friendly states in the nation.
- Based on FCC service quality data, Maine has some of the best service and reliability ratings in the country.
- There are over 110,000 miles of fiber optic cable throughout Maine.

Maine Works adds that because of this infrastructure, several new companies have established themselves in Maine or have expanded in Maine and they now provide over 6,000 workers with employment. The emphasis in the economic development efforts of the state for several years has focused on the growth and prosperity of the small business sector since it is the backbone of the state's economy and Maine's telecommunications infrastructure supports this endeavor.

Governor John Elias Baldacci's economic development strategy targets investment in biotech and biomedical research, and financial services. It also supports Maine's mature industries such as forest products, tourism, marine related industries and precision manufacturing. In addition, the Governor is promoting and supporting entrepreneurship, small business and the expansion of a creative economy. The greatest demand for workers in Maine is for those people with associate degrees, especially in technical areas.

ECONOMIC DEVELOPMENT STRATEGIC ACTIONS

<i>Emerging Industries</i>	<i>Existing Industries</i>
<ul style="list-style-type: none"> • Biotechnology • Composite Materials • Environmental Technology • Financial Services • High-tech Electronic Manufacturing • Information Technology • Marine Science Technology 	<ul style="list-style-type: none"> • Health Services • Natural Resource Based Industries • Paper and other Mature Industries • Precision Metal Manufacturing • Protective Services • Retirement Industry • Small Businesses and Micro-enterprises • Tourism

The administration will continue the efforts to support and grow small businesses. It will continue its incubator programs that provide micro and small businesses an environment in which to succeed. The current administration also has targeted the growth and support of entrepreneurs. Maine has many entrepreneurs but there has not been a coordinated effort to support and network these individuals to ensure their success. To that end, an Entrepreneurship Working Group has been formed as a subcommittee of the Maine Small Business Advisory Council. This group coordinates entrepreneurship across the full spectrum of state services from education to economic development to taxation and policy development. In keeping with that effort, the Maine Department of Education’s Career and Technical Education Team has worked with some teachers in Washington County to develop pilot sites for entrepreneurship education. These efforts will become statewide and will become K-adult. (See “Strengthening Connections Between Secondary and Postsecondary Education.”)

Maine will continue to use federal dollars to support program development and/or improvement, to strengthen both the academic and technical components of CTE programs and to promote nontraditional education and training for new or expanded programs in the emerging industries as well as in the re-tooling of programs that support existing industries. Entrepreneurship activities also will be supported in keeping with the Governor’s economic development agenda.

Maine will provide all 7-12th grade students with computer skills and with career awareness and decision-making skills

Maine is in the process of creating a seamless K-16 educational system that will prepare Maine citizens to thrive in a knowledge-based economy. This was the first recommendation of the *Maine’s Investment Imperative* report. One of the legacies of Governor Angus King’s administration was the provision of laptop computers to all of Maine’s 7th and 8th grade students. Controversial at first, this initiative has proven to be extremely successful in engaging students in learning. Student scores have increased,

attendance rates have increased and discipline problems have decreased. Students have embraced the technology and it has helped to level the playing field for students whose families do not have computers in the home. Plans are now being finalized to provide all 9th-12th grade students with their own laptops as well. Knowledge of computer use and applications gives Maine students an edge, both in terms of knowledge and in terms of technological literacy. This initiative, among others, will place Maine students in a more competitive position to obtain higher paying jobs.

Career Preparation Content Area to be Implemented

The Career Preparation Content Area of the Maine Learning Results is closer to implementation by all schools at all grade levels. A Career Prep Content Panel has been working on the review and revision of the Maine Learning Results following the same protocol as the other content areas. The team consists of 8-12 career preparation educators, with representation from elementary and secondary schools as well as from school administration and higher education. Consideration also was given to geographical distribution. A draft of the revisions of the Career Prep Content Area will be posted on the MDOE web site by March 1, 2006. Career Prep is due to be implemented in 2007-08 and will be a requirement for graduation in June 2012. Work is continuing to ensure that the elements will be in place for those schools that are ready to implement the Career Prep content area.

D. INVESTING IN EFFECTIVE, HIGH QUALITY LOCAL PROGRAMS

Perkins III emphasizes that services in CTE are of sufficient size, scope and quality to be effective. Maine has twenty-six schools that offer Career and Technical Education at the high school level. Program quality is monitored in several ways. Before a new program is approved, it must complete an approval process that covers every aspect of the course offering from the labor market research in the planning stages to the curriculum, instruction and assessment development to the articulation with postsecondary education.

Maine is currently reviewing and revising its Adult Education laws and rules. In the process the committee is strengthening the rigor of the adult CTE programs and aligning their definitions so that they are consistent among Adult Education programs whether they are funded at the secondary or postsecondary level.

Administrative activities over the course of the five-year state plan have been concentrated on making changes in the state's accountability reporting, both to the U.S. Department of Education and from the local recipients. The new system enables the CTE team to obtain local data from which to make programmatic and funding decisions. The state is working on improving the data gathering of its Adult CTE student information. The state's MIS team will be creating a data base similar to that of secondary CTE in order to be able to obtain the data needed for the OVAE accountability system.

Career and Technical Education Team (CTET) consultants continue to review statewide audit results and local Perkins applications. They also perform onsite reviews. The state has piloted a new monitoring process for local recipients in three areas of the state. It will go ahead with full implementation in the 2006-2007 school year.

Each year there is an in-depth review of each local plan, including a financial review, before any money is allocated. The local plans must meet all elements of a checklist that has been developed for plan reviews. In addition there is a desk audit that is required annually for all schools. Each plan is checked for completeness and then it is evaluated for quality. **The plans are submitted on line as are the mid-year and final progress reports. The system now has the capability of linking the goals and objectives of the planned activities to the progress reports and schools must address each of the activities in their progress reports.**

The planning instructions for local applications for assistance under Perkins III required the completion of a statewide quality self-assessment of all existing and proposed CTE programs. The state is continuing to utilize that assessment to inform the development of state and local plans and to assist state and local efforts in meeting the quality and effectiveness requirements of Perkins III. Now that the state has the ability to break out data by school, each local recipient will be required to explain how it will meet the accountability goals established by the state if it has not met the state's negotiated targets.

The Baldacci administration recognizes that occupational skill development and other dimensions of technical/workforce education must remain viable and essential components of public secondary education. The high school diploma is no longer an end in itself. All students must master the common core skills and knowledge in reading, writing, communications, mathematics, problem solving, scientific understanding and reasoning, family life and civics as Maine has defined in its system of Learning Results. However, all students also need to understand the core workplace skills and knowledge such as teamwork, ethics, employability skills, etc. Many will also need the specific technical skills that will prepare them for high skills jobs in a variety of technical fields.

The administration, in conjunction with the Maine ASCD and several business partners, sponsored a two-day summit on education and the economy in January 2005. Guest speakers featured Dr. Willard Daggett, President, International Center for Leadership in Education; Marc Tucker, President, National Center for Education and the Economy; Dr. Alan November, professor and technology guru; and Dr. Seymour Pappert, Professor Emeritus, Massachusetts Institute of Technology. More than 350 people from education, workforce development and business and industry attended. Part of the second day was devoted to the identification of changes, directions, policies, etc. that need to be made in order for Maine to be able to realize its goal of attracting high quality jobs and educating high quality workers. These recommendations have been published and work has begun on implementation.

Maine has recognized that secondary and postsecondary career and technical education must become an integrated high achievement educational system to ensure prosperity in

the global economy of Maine’s future. The talents, energies and skills of every member of the labor force must be mobilized to the fullest. High achievement and a full range of choices must be the watchwords at both the secondary and postsecondary levels.

FY 2005 PERKINS III BUDGET FORMAT

(For Federal Funds to Become Available Beginning on July 1, 2005)

(Note—this is an estimate of Maine’s allocation. Congress has not finalized the budget so these figures could change. This is a reduction from last year.)

Title I—Assistance to States

Local Formula Distribution (not less than 85%)	
Secondary Programs (50% of Title I grant)	\$ 2,232,994
Postsecondary Programs (50% of Title I grant)	<u>\$ 2,232,993</u>
Subtotal	\$ 4,465,987
Reserve (not more than 10% of Title I grant; if applicable)	
Secondary Programs (27% of Title I grant)	\$ 136,220
Postsecondary Programs (73% of Title I grant)	<u>\$ 360,000</u>
Subtotal	\$ 496,220
Leadership (not more than 10%)	\$445,410
Nontraditional Training and Employment (Between \$60,000 and \$150,000)	\$ 80,000
Corrections or Institutions (Up to 1% of Title I grant)	<u>\$ 58,379</u>
Subtotal	\$ 583,789
State Administration (up to 5% of Title I grant)	\$ 291,895
State Match (from non-federal funds) ¹	\$ 291,895
Total: State Grant	\$ 5,837,891

Title II—Tech-Prep Education

Tech-Prep funds for consortia	\$ 529,058
Number of Consortia ____1____	
Method of Distribution (check one):	
____ Formula	
__X__ Competitive	
Tech-Prep Administration	\$ 0
Total: Tech-Prep Grant	\$ 529,058

ACCOUNTABILITY TARGETS

STATE NAME: MAINE

Proposed levels of performance for program year 7 (FY 2005-2006) that requires the State to continually make progress toward improving the performance of vocational and technical education students as required by section 113(b)(3)(A)(i)(II) of Perkins III.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10
Core Sub-Indicator	Measurement Definition	Measurement Approach	Final Agreed Upon Baseline	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
				7/01/00-6/30/01	7/01/01-6/30/02	7/01/02-6/30/03	7/01/03-6/30/04	7/01/04-6/30/05	7/01/05-6/30/06
1S1 Secondary Academic Attainment	Numerator: Number of high school seniors who are vocational education completers who graduate. Denominator: Number of high school seniors who graduate.	High School Graduation (7)	B: 89.06%	L: 89.56% A: 87.96%	L: 89.56% A: 83.92%	L: 89.56% A: 91.92%	L: 90.06% A: 86.52%	L: 90.06% A:	L: 87.45%
1S2 Secondary Technical Attainment	Numerator: Number of high school seniors enrolled in an approved secondary vocational program, at each region and center and statewide, who are reported as "Completed 50% or More" or "Completed" on end-of-year EF-V-116 forms. Denominator: Number of high school seniors enrolled in an approved secondary vocational program at each region and center statewide.	Vocational/ Technical Course Completion (4)	B: 89.93%	L: 90.43% A: 94.58%	L: 90.43% A: 85.38%	L: 90.43% A: 86.46%	L: 90.93% A: 83.56%	L: 90.00% A:	L: 85.13%
2S1 Secondary High School Completion	Numerator: Number of high school seniors enrolled in an approved secondary vocational program at each center and region and statewide	State/Local Administrative Data (1)	B: 89.06%	L: 89.56% A: 87.96%	L: 89.56% A: 83.92%	L: 89.56% A: 91.92%	L: 90.06% A: 86.52%	L: 90.06% A:	L: 87.45%

	<p>who are reported as "Graduated" on end-of-year EF-V-116 forms.</p> <p>Denominator: Number of high school seniors enrolled in an approved vocational program at each region and center and statewide.</p>								
<p>3S1 Secondary Placement</p>	<p>Numerator: Number of 12th grade secondary vocational program participants reported as both 50% or more completers and graduates on end-of-year EF-V-116 forms who enroll in postsecondary education, military service, or advanced training within one year, or who enter employment according to University of Maine System, Maine Technical College System, Maine Department of Labor, or U.S. Department of Defense records, based on social security number matches.</p> <p>Denominator: Number of 12th grade secondary vocational program participants reported as both 50% or more completers and graduates on end-of-year EF-V-116</p>	<p>State-Developed School-Administered Surveys/ Placement Records (1)</p>	<p><i>B: 59.00%</i></p>	<p><i>L: 59.50%</i> <i>A: 58.34%</i></p>	<p><i>L: 59.50%</i> <i>A: 63.61%</i></p>	<p><i>L: 59.60%</i> <i>A: 68.56%</i></p>	<p><i>L: 60:00%</i> <i>A: 94.90%</i></p>	<p><i>L: 60.00%</i> <i>A:</i></p>	<p><i>L: 75.69%</i> <i>60.98</i></p>

	forms at each region and center and statewide.								
4S1 Secondary Nontraditional Participation	Numerator: Number of males and females enrolled in approved secondary vocational programs that are non-traditional for their gender, at each center and region and statewide, who are reported on the EF-V-116 forms Denominator: Total number of students enrolled in these programs at each region and center and statewide as reported on the EF-V-116 forms	State/Local Administrative Data (1)	<i>B: 7.08%</i>	<i>L: 7.33%</i> <i>A: 7.39%</i>	<i>L: 7.33%</i> <i>A: 7.73%</i>	<i>L: 7.33%</i> <i>A: 7.48%</i>	<i>L: 7.83%</i> <i>A: 9.85%</i>	<i>L: 7.83%</i> <i>A:</i>	<i>L: 8.35%</i>
4S2 Secondary Nontraditional Completion	Numerator: Number of males and females who are reported on the EF-V-116 form as "Completed" or "Graduated" from approved secondary vocational programs that are non-traditional for their gender, at each center and region and statewide. Denominator: Total number of students graduating from these programs at each center and region and statewide as reported on the EF-V-116 forms.	State/Local Administrative Data (1)	<i>B: 8.09%</i>	<i>L: 8.34%</i> <i>A: 7.78%</i>	<i>L: 8.34%</i> <i>A: 11.87%</i>	<i>L: 8.34%</i> <i>A: 9.99%</i>	<i>L: 8.84%</i> <i>A: 13.45%</i>	<i>L: 8.84%</i> <i>A:</i>	<i>L: 11.77%</i>

* Note:

B = Initial baseline, L = Negotiated performance level, and A = Actual performance.

STATE NAME: MAINE

Proposed levels of performance for program year 7 (FY 2005-2006) that requires the State to continually make progress toward improving the performance of vocational and technical education students as required by section 113(b)(3)(A)(i)(II) of Perkins III.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10
Core Sub-Indicator	Measurement Definition	Measurement Approach	Final Agreed Upon Baseline	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
				7/01/00-6/30/01	7/01/01-6/30/02	7/01/02-6/30/03	7/01/03-6/30/04	7/01/04-6/30/05	7/01/05-6/30/06
1P1 Academic Attainment	<p>Numerator: Students matriculated into postsecondary technical education programs offered by the MTCS, by program, college, and system-wide, who have successfully met the approved academic and technical skill requirements of their program and received and AAS degree, diploma, or certificate.</p> <p>Denominator: Matriculated students of the MTCS, including graduating seniors, plus students who have disenrolled, by program, college, and system-wide.</p>	Program Completion (6)	B: 25.44%	L: 26.44% A: 26.18%	L: 25.44% A: 24.45%	L: 26.44% A: 23.83%	L: 25.44% A: 27.09%	L: 25.44% A:	L: 25.12%
1P2 Technical Attainment	<p>Numerator: Students matriculated into postsecondary technical education programs offered by the MTCS, by program, college, and system-wide, who have successfully met the approved academic and technical skill</p>	Program Completion (6)	B: 25.44%	L: 26.44% A: 26.18%	L: 26.44% A: 24.45%	L: 26.44% A: 23.83%	L: 25.44% A: 27.09%	L: 25.44% A:	L: 25.12%

	requirements of their program and received and AAS degree, diploma, or certificate. Denominator: Matriculated students of the MTCS, including graduating seniors, plus students who have disenrolled, by program, college, and system-wide.								
2P1 Degree Credential	Numerator: Students matriculated into postsecondary technical education programs offered by the MTCS, by program, college, and system-wide, who have successfully met the approved academic and technical skill requirements of their program and received and AAS degree, diploma, or certificate. Denominator: Matriculated students of the MTCS, including graduating seniors, plus students who have disenrolled, by program, college, and system-wide.	State and Local Administrative Data (1)	<i>B: 25.44%</i>	<i>L: 26.44%</i> <i>A: 26.18%</i>	<i>L: 26.44%</i> <i>A: 24.45%</i>	<i>L: 26.44%</i> <i>A: 23.83%</i>	<i>L: 25.44%</i> <i>A: 27.09%</i>	<i>L: 25.44%</i> <i>A:</i>	<i>L: 25.12%</i>
3P1 Postsecondary Placement	Numerator: Maine Technical College System graduates, by program, at each college and system-wide, who become employed full-time within one year of graduation	State-Developed,	<i>B: 77.52%</i>	<i>L: 78.02%</i> <i>A: 90.35%</i>	<i>L: 78.02%</i> <i>A: 96.78%</i>	<i>L: 78.02%</i> <i>A: 83.66%</i>	<i>L: 78.02%</i> <i>A: 85.40%</i>	<i>L: 80.00%</i> <i>A:</i>	<i>L: 88.61%</i> 85.22

	and remain employed for a minimum of two Unemployment Insurance System ED-202 wage record quarters (or others OVAE-designated time period), based on social security number matches with UI ES-202 wage record data. Denominator: Successful completers of Maine Technical College System postsecondary vocational-technical education programs, by program, college and system-wide.	School Administered Surveys/Placement Records & Administrative Records Exchange (1 & 3)							
3P2 Postsecondary Retention	Numerator: Maine Technical College System graduates, by program, at each college and system-wide, who become employed full-time within one year of graduation and remain employed for a minimum of two Unemployment Insurance System ED-202 wage record quarters (or others OVAE-designated time period), based on social security number matches with UI ES-202 wage record data. Denominator: Successful completers of Maine Technical College System postsecondary vocational-technical education programs, by	State-Developed, School-Administered Surveys/Placement Records & Administrative Record Exchange (1 & 3)	<i>B: 77.52%</i>	<i>B: 78.02%</i> <i>A: 79.49%</i>	<i>B: 78.02%</i> <i>A: 86.61%</i>	<i>B: 78.02%</i> <i>A: 83.66%</i>	<i>B: 78.02%</i> <i>A: 85.40%</i>	<i>L: 80.00%</i> <i>A:</i>	<i>L: 85.22%</i>

	program, college and system-wide.								
4P1 Nontrad Participation	Numerator: Number of males and females enrolled in an identified non-traditional (for their gender), high technology/skill, high wage program. Denominator: Total males and females enrolled in an identified non-traditional, high technology/ skills, high wage program.	State/Local Administered Data (1)	<i>B: 11.39%</i>	<i>B: 11.64%</i> <i>A: 12.61%</i>	<i>B: 11.64%</i> <i>A: 11.05%</i>	<i>B: 11.64%</i> <i>A: 7.29%</i>	<i>B: 12.64%</i> <i>A: 10.03%</i>	<i>L: 20.00%</i> <i>A:</i>	<i>L: 9.46%</i>
4P2 Nontrad Completion	Numerator: Number of males and females completing an identified non-traditional, high technology/skill, high wage program Denominator: Total males and females completing such program.	State /Local Administrative Data (1)	<i>B: 17.57%</i>	<i>L: 17.82%</i> <i>A: 17.92%</i>	<i>L: 17.82%</i> <i>A: 11.01%</i>	<i>L: 17.82%</i> <i>A: 14.50%</i>	<i>L: 18.82%</i> <i>A: 36.07%</i>	<i>L: 16.40%</i> <i>A:</i>	<i>L: 20.53%</i>

* Note:

B = Initial baseline, L = Negotiated performance level, and A = Actual performance.

Maine’s PY 2005-2006 plan revisions, covering State and local career and technical education programs to be conducted with Federal support during the period July 1, 2005—June30, 2006 were prepared in conformity with requirements of Program Memorandum OVAE/DHSPCE FY2005-03 prepared by the United States Department of Education’s Office of Vocational and Adult Education and the U.S. Office of Management and Budget Notice of Action 1830-0556.

