

STEMMING the tide in eastern Connecticut

Federally funded initiative aims to revive science, tech-driven education, work force

By **ANTHONY CRONIN**
Enterprise Editor

John Beauregard is concerned. Over the past decade, he's watched as eastern Connecticut has transformed from a goods-producing economy to one driven by the service sector.

Where once factory and technology-driven jobs were the staple, today the jobs are in retailing, at the two giant casinos, in offices, in the professions.

While eastern Connecticut can boast of much stronger job growth since the 1990s than the rest of the state, its wage growth has been far more anemic.

And that's what bothers Beauregard, the executive director of the Eastern Connecticut Workforce Investment Board in Franklin.

There are a host of sobering statistics, which if not turned around over the next decade or so, could prove very troublesome for this part of Connecticut.

■ **From 2001 to 2006, the majority of job growth occurred in the wage range between \$30,000 and \$40,000.**

■ **During that same timeframe, eastern Connecticut lost more than 2,300 jobs that paid \$65,000 or more.**

■ **Workers in eastern Connecticut earn lower wages than workers across the rest of the state.**

■ **Wages in eastern Connecticut are roughly \$13,166 below the statewide average.**

■ **From 1990 to 2000, more than 27,000 residents in eastern Connecticut between the ages of 20 and 34 left the state for careers and opportunities in other states.**

Eastern Connecticut, it seems, is at a crossroads. It needs to develop the skilled workforce to take over the jobs that will soon be vacated by the Baby Boomers, who are beginning to retire in force from jobs in manufacturing, tech-

nology, telecommunications and the sciences.

"All of the employers we deal are concerned about the replacement of large numbers of workers who will be retiring," says Beauregard, an expert on eastern Connecticut's work force.

"And we openly recognize that the window of opportunity to do something (to address the issue) is shrinking," he adds.

The answer, according to Beauregard, business leaders and academicians in eastern Connecticut is to build a future work force that includes those skilled in the so-called STEM disciplines — science, technology, engineering and math.

Those disciplines produce good-paying jobs that will help to improve the region's standard of living, create a base of workers who can afford escalating housing prices and create a knowledge-based economy necessary for eastern Connecticut in this 21st century economy.

Eight of the 10 fastest-growing careers in eastern Connecticut require science, technology, engineering or math skills — and higher-education degrees.

"We really had to look at a transformational strategy," explains Beauregard, "that will allow us to be prepared for our future, to reverse some of these trends (toward lower wage jobs), to diversify our economy and allow high-wage, high-skilled employers to grow in eastern Connecticut."

Beauregard, along with his workforce board composed of the chief executives of the region's various municipalities, educators and business leaders, pushed for a federal grant to fund a regional STEM initiative in eastern Connecticut and beyond.

The good news is that the region has been awarded a \$250,000 federal grant to develop the right strategies to boost workers' engineering, technical, math and science skills.

Part of that federal funding will be used to work with local educational facilities to continue to develop science, technology, math and engineering courses and curriculums so students will have the requisite skills to work with the region's high-skilled employers.

"This is one of the most important planning projects that we've undertaken in the region in quite a long time regarding our eco-

nomic future," says Beauregard.

"We wanted to get in front of this problem. We didn't want to be dealing with this 10 years from now," he adds.

For Christopher Clouet, New London's schools superintendent, the STEM initiative is the right strategy at the right time.

Clouet, who heads the regional board overseeing this new STEM initiative, says programs in the schools that emphasize the sciences, technology and engineering are vitally needed for today's, and tomorrow's, work force.

In fact, he says his school has one of the only engineering-track programs offered to high schoolers in the region — to help alleviate the shortage of engineers in the work force.

"There's a recognition that for the United States to maintain its role as an economic engine to the world, there needs to be more of

these STEM initiatives, from training to job opportunities," says Clouet.

He says that there are already good connections between the region's academic institutions and some of its leading employers, from Pfizer Inc. to the Electric Boat shipyard and Lawrence & Memorial Hospital.

"They see the need for cultivating a group of potential employees in the future to be able to serve the technology needs of the future," says Clouet.

"EB has been a very prominent partner to help us work on our engineering track course offerings, both through high school and into community college and (four-year) college," he says.

He also says that the STEM initiative will ultimately lead to new science, math and technology-oriented careers for minority students, new arrivals to the region and other often-underrepresented constituencies in the sciences, math and engineering fields.

The top 10 jobs that will be in demand in 2010 didn't exist in 2004. ... We are currently preparing students for jobs that don't yet exist, using technologies that haven't yet been invented, in order to solve problems we don't even know are problems yet.

RICHARD RILEY, FORMER U.S. SECRETARY OF EDUCATION

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Why Science, Technology, Engineering and Math?

- Eight of the 10 fastest-growing careers in eastern Connecticut require these so-called "STEM" skills.
- Demand for computer sciences, nursing and engineering jobs will show strong growth through 2014.
- Without educated workers, eastern Connecticut cannot compete for high-quality, high-wage jobs.
- Employer demand for science, tech, engineering and math-related degrees already outpaces the current supply of workers.

Education Is Key

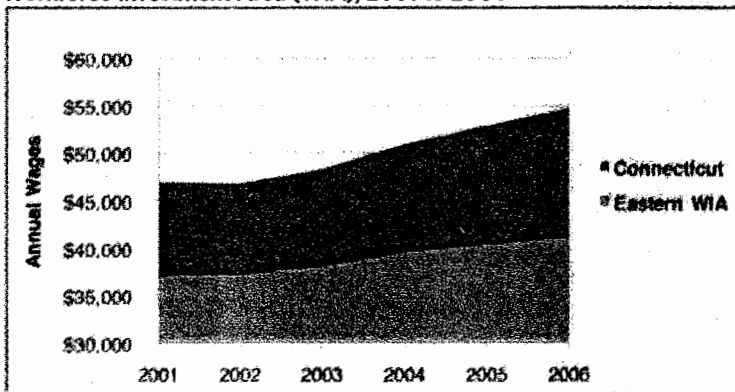
- Statewide, the percentage of the population with bachelor's degrees is 31.4 percent.
- In eastern Connecticut, that figure stands at 25.5 percent.
- In 2002, 33 percent of statewide jobs required post-secondary school training.
- Through 2012, 53 percent of new jobs will require post-secondary training.

...But the Millennials Aren't Staying

- The 'millennial' generation was born between 1980 and 2000, and is now joining our work force.
- The millennial generation will replace today's Baby Boomers in the workforce.
- Yet eastern Connecticut millennials are leaving in large numbers, a troubling indicator.
- Many of today's students are not embracing the sciences, mathematics, technology and engineering, which were once the strengths of eastern Connecticut's skilled workforce.

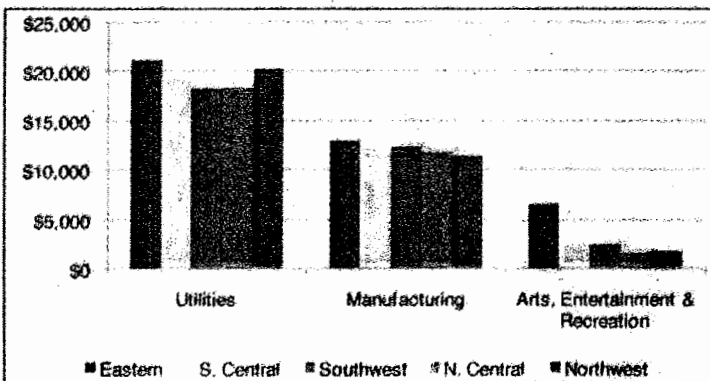
Source: Investing in Our Future/ Workforce Watch 2008, Eastern Connecticut Workforce Investment Board, Franklin.

Comparison of Annual Wages: Connecticut vs. Eastern Connecticut Workforce Investment Area (WIA), 2001 to 2006



CT Department of Labor, Information for Workforce Investment Planning, 2007

3rd Quarter 2007 Selected Industry Wages by Region



Source: CT Department of Labor, Information for Workforce Investment Planning, 2007



"We're losing a lot of talent by not tapping into people of color, new arrivals," says Clouet.

He points to the region's newly opened Science and Technology Magnet High School in New London as an epicenter for STEM initiatives among high schoolers.

By encouraging those students to become interested in careers involving science, engineering, technology and math, they are opening themselves up to the potential for careers in high-wage, high-skilled jobs.

"As a school superintendent, we look at the top ten employers of our families, and most are paying lower wages," says Clouet. "That becomes a problem for helping (some) kids out of poverty."

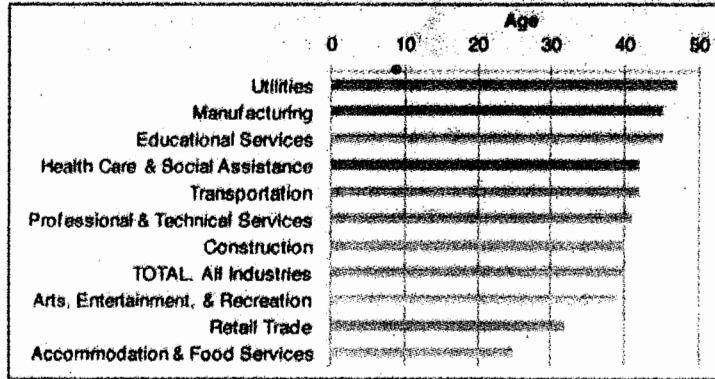
Clouet says that educators are as concerned about the declining wage base across eastern Connecticut as business leaders and civic officials.

He says that the federally funded STEM initiative is only in its earliest stages of coordinating strategies, courses and programs that will get eastern Connecticut's economy on track toward turning out workers who have a knowledge base and the talent to work in higher-skilled, higher-paying careers.

"We have more jobs and lower wages here (in eastern Connecticut)," says Clouet, "and that's not a good combination."

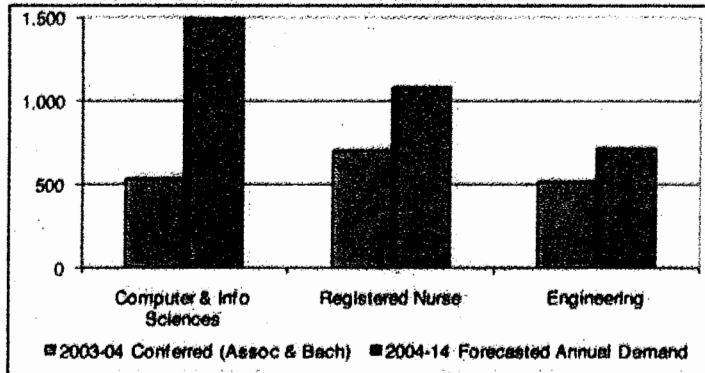
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3rd Quarter 2007 Eastern Connecticut WIA Employee Median Age by Industry



Source: CT Department of Labor, Workforce Employment Dynamics, 2007

STEM-Related Degrees Conferred vs. Forecasted Demand in Connecticut



Source: CT Department of Labor, Labor Market Information Source: CT Department of Higher Education