

*The Oklahoma Academy 2006 Town Hall*  
***Strategies for Oklahoma's Future***



***Volume 1***  
***Context, Thoughts and Ideas***  
*Social - Technology - Economic - Environment - Political*

# **Volume 1**

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**IN MEMORY**  
**Kathleen Sue Miller**  
**1952-2006**



former Director, Research & Economic Analysis  
Oklahoma Department of Commerce  
Academy Friend and Leader

These 2006 Town Hall research volumes are dedicated to the memory of our friend, Kathleen Miller.

Kathleen was an integral part of our Academy Research Team prior to passing away unexpectedly in early August. She was responsible for contacting and coordinating all of the research contributors in our Social chapter of Volume 2. Kathleen did a fine job and we appreciated her efforts and contributions.

As we planned this research effort, we have been “placeholdering” a page for Kathleen to submit an article about disabled Oklahomans. She promised to finish and submit her article upon her return from vacation in early August. As a tribute to Kathleen - we will leave that page blank.

Kathleen passed away Wednesday August 2, 2006 at her home at the age of 54. She was born May 4, 1952 in Hastings, MI, daughter of Clarence and Marion (Balduf) Miller. She grew up in the Lake Odessa and the Sunfield area and graduated from Lakewood High School (Lake Odessa) in 1970. Although Kathleen contracted polio at a very early age, she was never defined by her disability. She completed her Bachelor’s Degree in Business Administration through Central Michigan University in 1983 and was initially employed in areas that would benefit other individuals who were dealing with disabilities. Prior to moving to Oklahoma in 1991, Kathleen was employed at Hobbies of East Lansing, the Center of Handicapper Affairs, the University Center for International Rehabilitation at Michigan State University, and the State of Michigan Department of Commerce, established her own business known as Marketing Matters, Inc, was employed at Saxon Publishers in Norman, OK and most recently for the State of Oklahoma Department of Commerce where she was the Director of Research and Economic Analysis.



*Social - Technological - Economic - Environmental - Political*

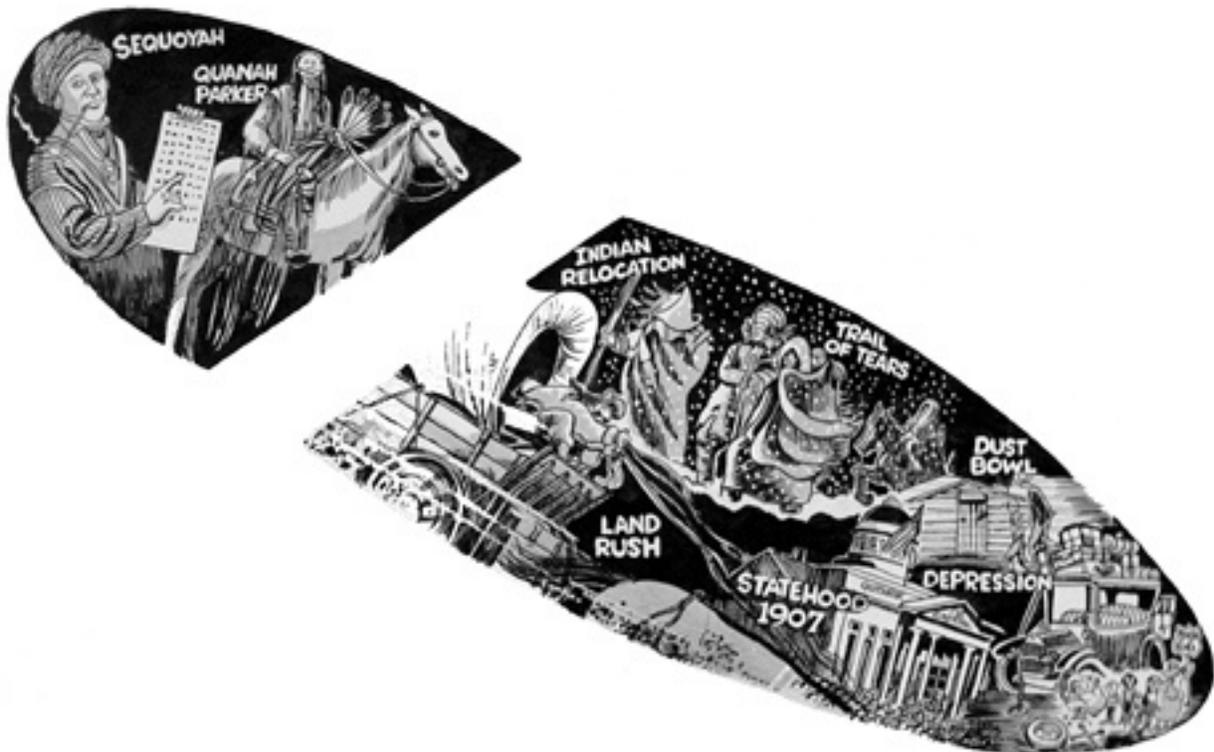
# *Oklahoma ^ Footsteps*

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*This section includes articles to introduce the 2006 Town Hall: Strategies for Oklahoma's Future.*

*Chairman Feaver sets a tone and context; Julie Knutson reviews our lead-in event, the 2006 Spring Forum; Jim Clinton of the Southern Growth Policies Board offers "southern" insights; Lex Holmes and Larkin Warner preview what you will read and add thoughts of their own; Jennifer Conatser reports on what our members think using our 1998 scenarios for Oklahoma's future. Mike Lapolla and Craig Knutson are the Academy Research Coordinators. They have a combined 40 years of exposure to every Academy Conference and Town Hall. They use that experience and exposure to offer several synthesized "big and bold" ideas that provide case studies into the kind of thinking that may produce an exciting Town Hall. This Introduction section is then followed by a separate document that provides a chapter for each STEEP factor OF Social, Technology, Economic, Environment, and Political.*



## *Playing with Notions of Heritage & Pedigree*

*John Feaver, PhD, Town Hall Chairman and  
President University of Science and Arts, Chickasha*

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### *Editor Comment*

*This is an inspirational essay written by a nearly native Oklahoman, thoughtful historian and accomplished academic leader. You need to read this perspective as you prepare for the Town Hall.*

*John Feaver is the 2006 Town Hall Chairman. He offers this analysis of the importance of history and heritage as we ponder our place in the future. It offers the lesson that we should not worship the past to the exclusion of preparing for the future - and suggests that as we plan our future that we do not run away from who we were and are.*

*Towards the end of his essay, John writes “We yet lack a focus of public attitude around which we can all rally, one that will allow us to transform our separate energies into a united synergy.” There it is. This is your Town Hall challenge. What is your idea about which “we may all rally?”*

### **USAO: A Case Study of Change**

I preside over the University of Science and Arts in Chickasha. As Oklahoma’s public, residential liberal arts college, USAO has more than an interesting background. Established in 1908 exclusively for women, it was the first college chartered by the first Oklahoma State Legislature.

It was one of only eight public women’s colleges ever created in the United States. Early known as the Oklahoma College for Women (OCW), its original liberal arts mission has never changed. As a publicly supported liberal arts college, it is one of the oldest in the nation. Historically, all were private.

In 1965, the college’s status was changed to coeducational. Its liberal arts mission was



continued. Through a complicated story, the next decade proved nearly disastrous for the school. Uneven administration, severe internal staff divisions, financial troubles, and local and state political interference nearly cost the institution its life.

During this period, however, the greatest damage to the school was a dramatic disconnect from its past.

Those who managed the college from the mid-1960s into the 1970s proceeded as though its old liberal arts traditions and pedigree for women were no longer relevant to the new liberal arts needs of a coeducational institution.

Unfortunately, the one constituency that could have done more than any other to assist USAO’s liberal arts coeducational success—the OCW liberal arts college alumnae—recoiled in horror, turning away hurt and disgusted, despairing of their beloved college. Cast loose from its traditional moorings and with a rapidly fading memory of its accomplished past, USAO’s “modern and progressive”, but historically insensitive and increasingly ambiguous, social environment left its faculty and staff beset with nagging ambivalence to struggle over issues of institutional identity, self-worth, and direction.

Confused and wandering, in the mid- and late-1980s, the college faced mounting critical public and political questions concerning its institutional credibility and reliability. The situation required dramatic correction.

Two things had to change.

First, the school needed to “fish or cut bait” on the question of its mission. A public, residential liberal arts college from the beginning, it had no

good choice other than to be a successful one. There was no rhyme or reason to have “just another” community or regional college in Chickasha, not with others nearby. Debate over identity and direction had to cease.

Second, if to achieve mission success, it was imperative that the college settle on an institutional compass to apprehend its best vision and strategic direction. A compass, of course, works only within a circumscribed environ. It tells you where to go but always in light of where you are and where you’ve been. Thus, aiming mission toward future success required that the school reconnect to its heritage and traditions, to the pedigree of its historic quality and academic and social culture.

With considerable effort, these two things happened.

Today, inspired by its archival treasures and historic memory, the college carefully studies its past while it plans its future. It is reconnected to its alumnae and alumni base. Its Foundation is rapidly growing. Its campus is listed as a National Historic District. U.S. News and World Report’s America’s Best Colleges ranks it the best public “comprehensive bachelor’s” college in the western United States. It has been admitted to membership in the Council of Public Liberal Arts Colleges, an exclusive national alliance of high quality, state-supported liberal arts colleges and universities. The State Regents have mandated it offer premiere residential undergraduate liberal arts learning opportunities and that its admissions standards rise to the highest in the state system of public colleges and universities.

### USAO: An Experience Worth Considering?

I am an historian by training and profession. Thus, it should not be surprising I have particular notions about history’s brew of heritage and tradition as a powerful stimulant of human behavior. At worst, their ingredients are mindlessly concocted to produce perverse and destructive effects. At best, however, heritage and tradition are a wellspring that continually refreshes our human need to possess identity and images of self-worth and, with

***“It was not until I was given management responsibility at USAO did I fully realize how devastating the absence of heritage and tradition could be to a society or how much their presence would mean to its salvation and energy.” John Feaver, President, USAO***

their reassuring longevity, offers a fuel to fire our hopes and aspirations for at least a healthy, if not better, future.

It was not until I was given management responsibility at USAO did I fully realize how devastating the absence of heritage and tradition could be to a society or how much their presence would mean to its salvation and energy.

Based on my USAO experience, I fervently believe the school’s story provides instructive parallels for our state. As Oklahomans we have yet to discover a common experience infused with those qualities of mind and spirit provided by shared heritage and traditions. As a people, we struggle to find a collective identity, to generate social and cultural confidence based on an attractive definition of self-worth, or to rally around a broad concept of purpose and direction.

I intend this as an observation, not a lament. We are historically and anciently divided, geographically, socially, economically, politically, culturally, you name it. As a state we are both an old and a young settlement significantly populated by the disparate experience of travelers and immigrants.



We continue to be strongly influenced by suspicions of anything that smacks of incorporation. On top of these divisions, we now face the disruptive and divisive influences of modernization and globalization.



Why haven't we done it; Why should we do it; How can it be done?

I'm least interested in answering the first. Indeed, I've already hinted at the reasons. Partly it's because we're a young state politically and legally and more

There are no panaceas. Finding degrees of community for any complex society, especially one as decentralized as ours, will be a long-term process, indeed trans-generational. Where, though, might be a useful place to start?

interested in obsolescence than permanence; more adept at individuality than collegiality; more inclined to piracy and plunder than civilization. It is far more complicated than this, of course.

Broadly and effectively educating ourselves about ourselves is critical. Many groups, public and private, local and statewide, devote great energy, time and resources to the effort. Their collective passions and programs attract enormous attention to the cause. Ultimately, however, the product remains flawed. Some, but still comparatively few Oklahomans yet know much about themselves—what we have been, what we are, and, as a people studied, where we might best be going.

I think there are critical and compelling reasons why we should now initiate an aggressive run at broadly and effectively educating ourselves about ourselves. It is timely. As a people and a state, we've arrived at a point of increasing social maturity that includes an emerging interest in what we're all about.

Massachusetts and Virginia each have a vivid early 17<sup>th</sup> century consciousness exalted in the shared heritage and traditions of both. Oklahoma does not. Texas has a vivid early 19<sup>th</sup> century consciousness exalted in its shared heritage and traditions. Oklahoma does not. New Mexico, Colorado, and Arizona each have a vivid anthropological and archeological consciousness also exalted in the shared heritage and traditions of each. Oklahoma does not.

We're now building great, new monuments to ourselves: the State Capitol Dome; the Oklahoma History Center; the American Indian Cultural Center. As we approach our Centennial, there's a rising tide across the state for celebrating and preserving "old things" and reusing them as tools for designing and crafting our future.

And yet, Oklahoma's historic and prehistoric panorama, a marvelous panorama, exists in all its intriguing glory and is quite the equal of any of them. It rests largely unclaimed by the public imagination, waiting for discovery, its wondrous but hidden forms inviting use for transforming our own popular consciousness of the past into shared heritage and traditions!

Indeed, pushing heritage appreciation, and saving "old things" makes good public policy sense and greatly enhances our potential for business and economic development. Historic preservation's reuse of existing built structures and infrastructures can be significantly cost effective as a construction strategy.

The fact that we haven't used our panorama effectively to this end offers up three questions:

It also can assist the constraints of limited county and municipal government budgets by curtailing the costs of urban sprawl while reserving good farmland for continued production; generate intra- and inter-state tourism; and offer novel and creative investment opportunities for public-private partnerships.

It makes good public policy sense in another critical way. It is base and ignoble, it is

inexcusable, that Oklahoma ranks near the top in many categories of human dysfunction, reflected in social and economic pathologies that, in part, derive from the experiences of children whose psychologies were overwhelmed by chronic confusion about identity and self-worth. At the risk of appearing a bit too sanguine, I think it not unreasonable to speculate that a more confident Oklahoma sense of its cultural self and shared heritage might help reduce the statistical incidence of personal and social failure from the first to, at least, the second tier nationally and perhaps more. Success would allow for the discretionary redirection of significant resources away from corrections and social services dependence to more useful and productive ends.

***“It is imperative that Oklahoma become a commonwealth with a well-defined and dynamic image, “brand” if you will, that draws divergent loyalties to a shared heritage and the value of confident conversation.”***  
*John Feaver, President, USAO*

Finally, I would observe the obvious. Our state is rapidly transitioning— socially, culturally, economically— and in context of a most competitive national and international environment. It is imperative that Oklahoma become a commonwealth with a well-defined and dynamic image, “brand” if you will, that draws divergent loyalties to a shared heritage and the value of confident conversation. By promoting ourselves distinctively and attractively on the national and global stage, we will better our potential to manage the vicissitudes and challenges of the competition.

We shall not gather at this special place of more common identity, however, without broadly and effectively teaching ourselves about ourselves.

Knowing who we are provides the necessary grist for defining who we are. Knowing and defining the collective self is our sole source for acquiring understandable images of individual and social worth. It is the stuff of shared heritage and traditions. It is the stuff of a coherent and collaborative society with consensual

commitments to purpose and direction. It is an essential source of civil and creative thought about the future.

So, how will it be done? Noble and heroic efforts abound, the work of the Oklahoma Historical Society, our new History Center, the Oklahoma Heritage Association, Preservation Oklahoma, the Centennial Commission, the American Indian Cultural Center, cultural and artifact museums, municipal and county historical societies, the tribal heritage offices, and more. Despite these collective efforts, however, the result remains haphazard and too far removed from the thoughts and perceptions of most citizens. We yet lack a focus of public attitude

around which we can all rally, one that will allow us to transform our separate energies into a united synergy.

Creating a focus must ultimately require that teaching ourselves about ourselves become one of the core experiences of growing up in Oklahoma. It will necessitate, I believe, no less than major, sweeping curriculum reform throughout our public schools, reform dictated by the requirement that broad and effective teaching ourselves about ourselves must begin in pre-school and extend continuously into college. Not just here and there, but throughout the curriculum, year after year, one building on the other, until our prehistoric and historic panorama, with its inspiring story of triumph and tragedy, comes finally to define the heart and soul of our social and cultural being.

My notion is a delightfully grand and magnificent political monster. Efforts to this end will stir great controversy, promote extensive inconvenience, and generate multiple oppositions. It will take a lot of time, cost money, and significantly alter the habits of public schooling. It would, though, be great fun to try and, in my thinking, promote great service to the future of Oklahoma’s health and well-being.

## ***Our 2006 Spring Forum: Preparing for the Town Hall***

*Julie Knutson, President and CEO*

*The Oklahoma Academy*

This Town Hall is critically important. We will envision Oklahoma's next 100 years and develop strategies to move Oklahoma in an aggressive direction to fully participate in a global 21<sup>st</sup> century. Continuing to operate as we have always done will not work anymore. **We want and need you to think to the future, be creative, and be bold!**

We began working on this Town Hall over a year ago. Several elements were included to provide the most crucial information possible for you to consider. The Research Team began their work on the background resource document in December 2005 identifying topics and authors and the overall composition. All authors were asked to answer a series of questions as they covered their topic, and each was asked to provide a metric to measure success in the future. The background resource document has been developed using the driving forces of Social, Technological, Environmental, Economic and Political (STEEP) associated with scenario thinking and planning.

### **2006 Town Hall preparation**

#### **OUR SPRING FORUM**

The Academy determined that the Spring Information Forum would focus on the Social, Technological, Environmental, Economic and Political elements that were significant in Oklahoma's historical development – the people, events, programs, plans and ideas from Oklahoma's history that should be considered as we look to the future. The Forum, “**Out of the Past ~ Into the Future,**” was held at the Oklahoma History Museum in early April, 2006. We assembled several prominent Oklahomans to make presentations, and we put together a resource book that provided excellent material. I'd like to

***“Continuing to operate as we have always done will not work anymore.” Julie Knutson, President, Oklahoma Academy***

highlight just a few of the presenters who captured the essence of what we were trying to share.

**The Honorable Robert Henry, Circuit Judge, 10<sup>th</sup> Circuit Court of Appeals**, shared his perspective on Oklahoma's artists and culture. Oklahoma's people and their creative spirit has been a cornerstone in the development of our state. In highlighting the various artists throughout our history who have provided a unique “picture” of our state through their music, dance, painting, sculpture and design, Judge Henry said “we can see clearly where we have been as a state, and, if we listen, where we should go.”

**Bob Blackburn, Ph.D., Executive Director of the Oklahoma Historical Society**, highlighted Oklahoma's historical challenges and opportunities. Oklahoma's *social* history was defined by diversity and a sense of community. We are the melting pot of the greater United States' melting pot. Our *technological* history was one of changing markets and adaptation. *Environmentally*, Oklahoma battled with segregation and freedom of choice, while *economically* we changed from a colonial system to a value-added system. History has shown that Oklahomans can overcome the limitations dictated by the environment, whether that environment is weather related or money related! In the *political* realm, Oklahoma had to choose between the needs of the individual and community action for the greatest good.

**Dewey Bartlett, Jr., President of Keener Oil & Gas Company** talked of the oil and gas industry of yesteryear and today. Recognizing that Oklahoma has always been an energy state, in looking to the future Bartlett envisions three areas in the oil and gas market where we could take bold steps for the betterment of the state.

(1) Hurricane Katrina showed the US just how vulnerable the Gulf's oil refineries are. Cushing, OK is located at the crossroads of all the major pipelines in the Midwest and does not have to contend with hurricanes. Oklahoma should build an oil refinery in this location!

(2) Many states, for environmental purposes, are sequestering CO<sub>2</sub> from the atmosphere, changing it to a liquid form and then pumping it several thousand feet underground. When liquid CO<sub>2</sub> is pumped into an existing oil well, it changes the properties of the residual oil left in the well that was previously thought to be unattainable and allows it to flow to a well board. This means Oklahoma oil wells still contain billions of crude oil in the ground that should be produced!

(3) Oklahoma has the 2<sup>nd</sup> and 3<sup>rd</sup> largest amount of natural gas deposits in the US. We could use these deposits to make fertilizers or burn it to make electricity. If we burn it to make electricity, it would give Oklahoma a huge economic advantage over the more regulated electrical systems in California and the Northeast and possibly attract business away from those markets!

**Michael Cawley, President of The Noble Foundation** talked about Oklahoma's science and agriculture endeavors. Before the downturn of the Great Depression, Oklahoma was agriculturally prosperous. After learning from the mistakes of exploitative farming practices, there has been an increased interest in science-based forage/crop production. This type of production and the technological advances in farming have allowed many farmers and ranchers to diversify their crops and cattle, use disease resistance plants and supplement their farming income with off-farm jobs.

**Bill Swisher, Ph.D., Founder of CMI Corp.** argued that the economic base of any state is initiated and developed by entrepreneurs. Our history has not been conducive for the entrepreneurial spirit to flourish in Oklahoma.

Five reasons for the lack of initiative are:

(1) Oklahoma's historical populist political philosophy has discouraged entrepreneurial success;

(2) the state's surplus of government;

(3) our tax load is too high as a ratio as compared to our gross state income;

(4) the historical mistrust between Oklahoma City and Tulsa, and between rural communities and the state's urban centers;

(5) Oklahoma's limited educational opportunities which hinders our economic and political knowledge. These areas must change before we can have a real entrepreneurial environment.

**David L. Thompson, Publisher of The Oklahoman** talked about print communications 150 years ago as compared to today. The first press was installed in 1835. The first newspaper was the Cherokee Advocate. Today, the newspaper industry is racing to embrace new technologies. The internet has had a profound influence on telecommunications. The enemy of the newspapers is not competition but rather the demand of the consumer's time. New trends are pod casting, wireless cell phone, smaller newspapers, local news, citizen journalism and multi-platform newspapers.

**A panel of Tribal leaders**, Chad Smith, Cherokee; Bill Anoatubby, Chickasaw Nation and Kelley Haney, Seminole Nation said that to understand the future, we must first understand the past. For the Native Americans it means a level playing field. Oklahoma was a land of exile for the Native Americans but they have made it their home. Chief Smith said "the Native Americans have had two trails of tears – the first led them to Oklahoma and the second was shared with other Oklahomans during the Great Depression."

He fears a third trail of tears for the state in the form of young people leaving the state. All three

Tribal leaders said that the only way to prevent this is through partnerships and cooperation between the Five Civilized Tribes and the State.

Former **Governors David Walters and George Nigh** shared their perspectives for Oklahoma and the future. Governor Nigh said that one of the major problems with Oklahoma is that Oklahomans still cannot get along. The inner fighting between east and west, Oklahoma City and Tulsa, rural and urban are preventing the state from moving forward. Oklahomans need to start thinking positively about their state; they must start thinking globally and to accept that change will happen.

Governor Walters believes that one of the state's biggest problems is first agreeing that there is a problem. Another problem facing the state is the focus on superfluous issues rather than getting to the real issues.

He offered four suggestions to put the state on the right track:

- (1) provide rural areas with free wireless internet;
- (2) create a billion dollar endowment for education and research;
- (3) create a state balance sheet to identify unproductive assets that could be sold with the money going to the billion dollar endowment; and
- (4) developing a high speed rail system as suggested by the Academy in 1998 connecting Oklahoma with Texas, Kansas, Colorado, new Mexico, etc. with Oklahoma City as the major hub for the system.

### ***The Academy 1998 conference, using scenario thinking ...***

The Academy developed four plausible futures for Oklahoma. A principal with Global Business Network (GBN), Jay Ogilvy, led the Academy conference participants through the scenario thinking process developing out-of-the box, creative ideas that could logically build Oklahoma's future as a competitive state in the global marketplace. Based upon where Oklahoma

was in 1998, the participants were charged to ultimately think to the year 2010. What would Oklahoma look like, how would it operate, and what did we need to do to aim for the most prosperous future? The results of that conference were amazing. The Academy developed four complete stories depicting each plausible future; the stories were transformed into four one act plays and were presented in six areas of the state. The futures and the strategies to aim us to the most prosperous future were shared with the Department of Commerce, the Governor, the legislature and as many Oklahomans as possible. Sadly though, GBN and other states paid more attention to the results (and used adaptations of them) than did Oklahomans!

### ***Academy Member Survey in June 2006...***

The Academy membership was asked to review the four plausible futures and complete a survey identifying which future they think best describes Oklahoma now and where we should aim to be. Jennifer Conatser, Academy staff, has provided an article in the resource document showing the results and analysis of the survey responses.

### **And now, mid-October, 2006 it's time for you to do your job!**

You are one of a few who have been selected to represent your vocation, geographic area, gender, age, culture and participate in this most important Town Hall. You are charged with setting the bar! This resource document is a jumping off point toward vigorous Town hall discussions. You are challenged to go beyond what we have always done and look to new, better, innovative ways to handle education, economic growth, research and technology, health and health care and environmental sustainability. You are challenged to consider the world — what is happening, what is not happening, what is likely to happen — and how Oklahoma, in the center of the United States, can develop in its second century to ensure prosperity for all of its citizens!

Do your homework, and let the Town Hall begin!

## ***Innovation with a Southern Accent***

*Jim Clinton, Executive Director, Southern Growth Policies Board  
Research Triangle Park, North Carolina*

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While several regions in the South have developed significant innovative capacity, the region as a whole has not made a full turn towards a knowledge-driven economy. One

marker of the region's failure to become fully committed to innovation is the 2006 *Business Week* survey of the world's most innovative companies. Of the Top 25 innovation companies in the world, only Wal-Mart is headquartered in the South.

But, the South does have bright spots in innovation – about 20 percent of the nation's research output in nanotechnology occurs in the South, and the region ranks third after New England and San Francisco Bay area in number of biotech companies – but the resources are scattered. Very few areas have a critical mass of innovation resources to stand alone.

In *Innovation with a Southern Accent*, Southern Growth Policies Board recommended a new  $V^3$  strategy for the region. This strategy urges a focus on increasing the volume, value and velocity of innovations that occur in the South as a path to economic prosperity. Increasing the volume of innovations means encouraging those who invent, those who create so that we have more chances to succeed.

Increasing the value of innovations means paying specific attention to those innovations that have the greatest opportunity to achieve higher gross profit margins on products and services emerging from the South. Increasing the velocity of innovations means making sure that we speed products and processes to the marketplace, that we don't lose because of bureaucratic or cultural impediments that allow others to reach the marketplace first.

***“Illiteracy used to be about not reading, now illiteracy is about not changing.”***

*Participant in a Southern Growth community forum, Oak Ridge, Tennessee*

Promoting the policies and harnessing the habits that will make innovation central to a Southern way of life will require a fundamental shift in our approach to

knowledge itself. The result would be a culture where knowledge and learning are primary social values, and essential to the region's global competitiveness.

Jeff Foxworthy, his contemporaries and decades of predecessors have made very successful careers by telling jokes about the ignorance of Southerners. While a self-deprecating sense of humor is an admirable quality, wouldn't it be nice to see someone get rich talking about how knowledgeable Southerners are? Wouldn't it be nice if Jeff Foxworthy has to say that you might be a redneck if...

- You've just hotwired your Blackberry to receive podcasts of Nascar races.
- You invented a sugar-free gum that tastes like Skoal.
- You hold six or more patents that each had the term “hunting dog” in its disclosure documents.

*Innovation with a Southern Accent* is dedicated to the premise and the hope that someday soon, whenever the word innovation is spoken anywhere in the world, it will be spoken with a Southern accent.



### **Using Knowledge in a “Knowledge Economy”**

The rise of the term “knowledge economy” has been coincident with the rise of the value of businesses that are considered to be knowledge-intensive. Much has been made, for example, of the relative values of Microsoft and Google versus General Motors, with the point being made that Microsoft and Google own very little in terms of physical assets but a great deal in terms of intellectual assets. Scottish Enterprise (Scotland’s economic development agency) defines “knowledge economy” as “...a situation where value lies increasingly in new ideas, software, services and relationships.”

For the purposes of *Innovation with a Southern Accent*, and the development of meaningful policy for the South, we have organized knowledge into three categories: *creation, accumulation and application*. If the South is to fully function in a knowledge-intensive economy, it must understand how to create, accumulate and apply knowledge. Those knowledge skills are essential to the process of innovation.

### **The Creation of Knowledge**

Scientists working in labs in industry, universities, hospitals and nonprofit research centers around the South are creating new knowledge everyday. The creators of new knowledge may be responsible for inventions, patents, papers, theories, basic or

applied science, art, music, literature or design.

The existence of a strong creative base in a region is crucial to the development of a vibrant, healthy knowledge economy.

### **The Accumulation of Knowledge**

The Georgia Research Alliance has invested about \$400 million in state funds in talent, infrastructure and technology commercialization during its fifteen years in business, and has leveraged that investment with \$2 billion in federal and private funding. The Milken Institute’s Ross DeVol describes it as a gamble based on the “big bang theory” of economic development, that is a very large-scale investment towards a narrow but potentially lucrative target.

The Georgia Research Alliance is working on *accumulating knowledge*. Those responsible for accumulating knowledge include people and institutions engaged in workforce development, pre-K initiatives, K-12 systems, community colleges, technical institutes, colleges and universities, lifelong learning initiatives, on-line learning, libraries, and more.

### **The Application of Knowledge**

In 1999, business guru Peter Drucker wrote about the emergence of e-business as a totally unexpected phenomenon that would continue to create astounding opportunities. For every

Monster, Amazon and eBay, there are dozens of smaller successes like North Carolina's Geomagic, Inc. Geomagic has, according to Business Week, "...defined and dominated the field of digital shape sampling and processing," resulting in five-year revenue growth above 2100 percent. Geomagic is *applying* knowledge.

### **Innovation in Economic Development**

In the years following the dot-com boom and bust, the primacy of profits has again become increasingly obvious. Neither revenue volume nor the number of nodes on a network is an adequate substitute for gross profit in calculating the value of a business. Moreover, as the North Carolina-based firm, Regional Technology Strategies, has pointed out, wealth creation in a region is directly tied to the gross profits that are generated by its businesses. The implications of this approach are that the creation of wealth in the South is a function of how effectively our businesses "...export goods and services and import cash." All economic development policy should be rooted in this reality.

Study after study has identified a positive impact of innovation on jobs, skills and wages. In most industrialized nations, technology accounts for about one-half of GDP growth. According to the National Institute of Standards and Technology (NIST), "...the rate of return to basic science is about three times that for applied R&D, which, in turn, has twice the return on physical capital." NIST also points out that median wages in more than half of the Bureau of Labor Statistics technology-oriented occupations "...were more than twice the median for all occupations."

Economist Michael Mendel says flatly, "If you want real growth, you have to have new technologies." The author of *Rational Exuberance: Silencing the Enemies of Growth and Why the Future is Better than you Think* says, "Historically, half of productivity growth comes from new technology. It doesn't have very much to do with budget deficits. It doesn't have very much to do with tax rates. At the end of the day, if you want

real growth, you have to have new technologies and you have to have the will to use them."

### **Creating a Culture of Innovation**

Building a Southern economy that is truly innovation-based will require a fundamental cultural shift towards valuing and celebrating knowledge, knowledgeable people, knowledgeable businesses and knowledgeable institutions. As the region begins to make this turn in policy and actions, so it must then make the turn in both internal and external perceptions. A civic and political commitment to change must be accompanied by a branding strategy that results in the entire world perceiving the South as a vibrant, dynamic and innovative region.

*This article is adapted from Southern Growth Policies Board's 2006 Report on the Future of the South, Innovation with a Southern Accent. For more information, visit ([www.southern.org/pubs/pubs.shtml#annual](http://www.southern.org/pubs/pubs.shtml#annual))*

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### **Chairman's Circle Southern Leadership Policies Board**

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Southwest Virginia Higher Education Center  
**The Oklahoma Academy**  
University of Delaware, Institute for Public Administration  
University of Oklahoma, Institute for Public Affairs  
University of South Carolina  
Institute for Public Service and Policy Research

## *What Our Members Think*

*Jennifer Conatser*

*The Oklahoma Academy, Norman*



### **Where ...?**

As Oklahomans approach our 100<sup>th</sup> birthday, the Academy wanted to know where Oklahomans think the state stands currently ...

and where it might be headed. Using the 1998 “Four Futures” scenarios as a guide, the Oklahoma Academy surveyed its members to determine which scenarios best describe the state now ... and in the future. Survey respondents were asked to read the “Four Futures” scenarios developed by the Oklahoma Academy in 1998. These four scenarios laid out four distinct futures for Oklahoma. (see following pages)

Surveys were distributed to the entire membership. A completed response required significant time and thought. There were 44 members fully

responding. There were 32 responses (73% of total) from Oklahoma City and Tulsa; and 12 (27% of total) from elsewhere. Responses were received from all six Academy regions.

The findings are generally as follows: Most on-metro respondents (75%) thought our state was “Oklahoma is OK” - that is not very competitive or outward thinking. Remarkably - every non-metro respondent thought that there would be absolutely no change in the future from where we are today.

Both Tulsa and Oklahoma City respondents also believed that we are currently an “Oklahoma is OK” state - but were more optimistic about being more competitive in the future; and the Oklahoma City respondents were the most optimistic of all. The overall trend seems to be that Oklahoma will be more competitive and more global - albeit the predicted movement is small.

### **Where Are We Now?**

	<b>TULSA</b>	<b>OKC</b>	<b>OTHER</b>	<b>TOTAL</b>
Global Wannabes	8%	20%	8%	14%
<b>Oklahoma is OK</b>	<b>75%</b>	<b>55%</b>	<b>75%</b>	<b>66%</b>
Turkey Tales	8%	15%	8%	11%
<u>Prosperity Unleashed</u>	<u>8%</u>	<u>10%</u>	<u>8%</u>	<u>9%</u>
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

### **Where Are We Headed?**

	<b>TULSA</b>	<b>OKC</b>	<b>OTHER</b>	<b>TOTAL</b>
Global Wannabes	0%	20%	8%	11%
<b>Oklahoma is OK</b>	<b>58%</b>	<b>40%</b>	<b>75%</b>	<b>55%</b>
Turkey Tales	25%	15%	8%	16%
<u>Prosperity Unleashed</u>	<u>17%</u>	<u>25%</u>	<u>8%</u>	<u>18%</u>
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

# Where We Are ... Where We are Going

## Global Investment Perspective

14% to 11%  
Global Wannabes



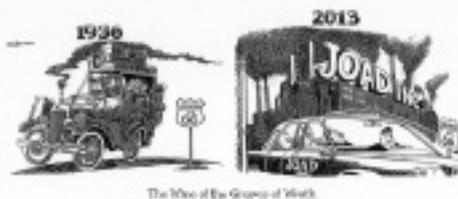
9% to 18%  
Prosperity Unleashed



Non-Competitive  
Oklahomans

Competitive  
Oklahomans

Oklahoma is OK!



66% to 55%

Turkey Tales



11% to 16%

## Local Investment Perspective

### Global Wannabes

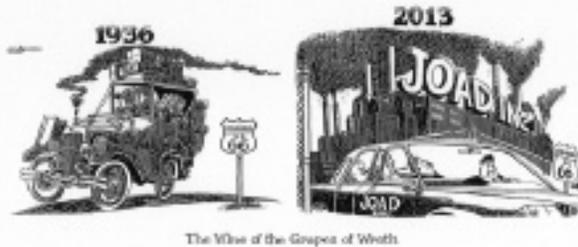


#### Global Investment Perspective Non-Competitive Populace

**14% to 11%**

In this scenario, we see an Oklahoma where leaders thought "global" ... but the lack of competitiveness of the state's institutions and people precluded success. The story shows that even the super-human efforts of the "best and brightest" are rarely enough to make significant improvements in something as complex as a state. It illustrates that less than comprehensive ideas, even when implemented, seldom have a broad impact. It demonstrates that significant state success requires a strong foundation. It requires sound institutions, collective efforts by large groups, and sound public policy investments, and the "tincture of time." In the global competitiveness game, the steady tortoise more likely wins the longer races.

### Oklahoma is OK!



#### Local Investment Perspective Non-Competitive Populace

**66% to 55%**

In this scenario, we see an Oklahoma that has become non-competitive in a technologically savvy world; and an Oklahoma that has withdrawn into a local and parochial investment perspective. Oklahoma public policy worshipped the short term and ignored the long view. Low taxes, low costs of living, and populist sentiments have created an Oklahoma where outsiders regularly create and remove wealth. Oklahoma has joined a dozen other smaller states in becoming a "colony" for others to exploit. It is an irony that the "outsiders" in this scenario were once forced out of Oklahoma, and have now returned with capital, technology and a grand vision. It describes the return of the once infamous Joad family of the "Grapes of Wrath". The Joads personified the "Okie" migrants seeking a better life in California.



## ***Member Survey Comments: OUCH!***

*Jennifer Conatser, Staff, Oklahoma Academy, Norman*

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### **COMMENTS: WHERE ARE WE TODAY?**

- Great Resistance to higher educational standards.
- We are not business friendly.
- **Majority of citizens appear to be content with low taxes, low cost of living, declining population and continue electing leaders in State Government who have no long term vision for growth/investment in our state.**
- Too much politically expedient, short-term thinking. Therefore, too easy to exploit people and resources.
- We are either “80%” or ranked in the “40s” in most things that matter.
- We are too concerned with change to actually attempt ... risk and change.
- The Academy has provided visions of the future, but insufficient numbers of Oklahomans respond.
- Oklahoma leadership often “says” the right thing, knows what ought to be done; but, saying is not doing. Time, talent and treasure are rarely focused on a vision – over the long haul.
- **It seems that outsiders are the ones making investments in Oklahoma (i.e. real estate, to some degree oil & gas, technology). If an Oklahoman has a good idea or business, as soon as it is mildly successful it is sold to an outsider that soon moves it elsewhere.**
- **We have a statewide self-esteem problem.**
- Oklahoma is not competitive on anything except low cost of living. Tulsa’s downtown has already been bought up by Californians.
- **When Devon & Chesapeake merge or sell to Shell, Exxon, etc. and move to Houston, OKC will fight Tulsa’s battle again.**
- **I have no doubt that other responses will be more positive, but I fear that would be wishful thinking. Oklahoma has pockets of competitiveness and dynamic thinking, but from our political “leadership” to the man on the street we continue to rearrange deck chairs on the titanic. We actually rejoice when the Joads of the world take advantage of us.**
- The state is non-competitive, very conservative, thinks short-term, outsiders come in and remove wealth

### **COMMENTS: WHERE ARE WE HEADED?**

- Anti-tax, anti-intellectual sentiment. We’re three generations away from being competitive.
- If we cut taxes we will not have the appropriate revenue to fund important services to the state.
- I believe the state has a very bright future with numerous industries currently growing.
- **Unless there is a change in attitude, Oklahoma will stay in this holding pattern for an indefinite time period.**

**COMMENTS:**  
**ACHIEVING “PROSPERITY UNLEASHED”**

- Create trapezoid of prosperity: let the rest of the state wither.
- **Change focus from government creating prosperity to government helping create opportunity for private sector. Quit trying to make everything “equal.” Invest in pockets of excellence and let things fail.**
- Fund startup companies with state venture monies
- Research & technology commercialization, large scale internship programs, science & math curriculums.
- Leverage federal dollars for infrastructure, healthcare and tourism; quality/affordable early childhood education & housing joints.
- Leverage many sectors of the state (infrastructure); initiate a massive campaign to improve the health of Oklahomans.
- A larger view of Tulsa and its surroundings. Most here think Skelly is the edge of the civilized world.
- **Serious long term mass transportation plan – bold and feasible – fast trains and big airport.**
- **Ring roads around Tulsa & OKC; Linear link (12 lanes and rail) connecting Tulsa and OKC, state airport near Stroud**
- K-14 system and content (instructional quality and more rigorous curricular content).
- Self-investment pays off.
- **Need to evaluate curriculum, have some accountability measurements, and positive parental involvement. We need to raise the bar for high school graduates and college entrance requirements.**
- Improved health statistics, healthy work force.
- Continue developing the downtown areas for both OKC and Tulsa as these will be the hubs for future growth.
- Continued push for the preservation of arts education in the public school system to create well-rounded students
- **PreK-16+ education system, state funded; Fund OU, OSU at Big 12 average; Replace our income tax with broad based sales tax on services (with value added element so business is not double taxed).**
- Focus your resources where they do the most good, rather than making sure everyone gets a share.
- **Legislators and state leaders are too risk adverse to make wholesale changes. A very detailed and descriptive action plan must be developed so that everyone knows where we are going, how to get there and what place they fit into.**
- Promote availability of technology and the fact that in today’s world we no longer have to live near our workplace.
- We need to include environmental protection and sustainability as a part of our plan.
- Connect Tulsa & OKC by high-speed rail.

## ***What You Will Read & What I Think***

*Larkin Warner, PhD, Regents Professor Emeritus  
Oklahoma State University*

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*Dr. Larkin Warner has been a loyal member of the Oklahoma Academy since its rebirth in 1985. We have asked Dr. Warner to preview this long and complex document to offer you a preview of what you will read. Why Dr. Warner? The reason is best explained by the following introduction of him as a recipient of OSU's Leadership Legacy Award.*



*“Trends tell the future, according to Dr. Larkin Warner, OSU Regent’s Professor Emeritus. Warner’s leadership in economic forecasting has chronicled areas ranging from the state’s educational future to its water resources, from health and human services to revisions of the Constitution, from Native American economic issues to the history and future of Oklahoma’s economy.*

*Warner, a Phi Beta Kappa, began a nearly forty year association with OSU as an Assistant Professor for the Department of Economics. His distinguished professional career included a research position with the Kerr Foundation and induction into the prestigious Oklahoma Higher Education Hall of Fame.*

*“Leadership means getting involved, serving the useful needs of organizations, and adding value by applying professional skills and information,” says Warner. “The great feature of OSU is its institutional commitment to public service - with an understanding that such service is, in fact, expected of members of our university community.”*

The scores of briefs in this background research document reflect the best thinking of a diverse set of experts charged with fashioning strategies for Oklahoma’s second century. The briefs are organized around five broad fields known by the acronym STEEP—Social, Technological, Economic, Environmental, and Political. The writers were asked to focus on how actions within their areas of interest can help Oklahoma capitalize on growth sectors of the 21<sup>st</sup> Century. Writers were also asked to suggest a “metric” or measurement to use to account for progress in their area of interest.

Readers are going to discover that the research briefs are both informative and thought-provoking. Each of the writers volunteered her/his services in preparing the briefs. As the tone of their presentations indicates, the writers are thoroughly committed to an improved 21<sup>st</sup> Century Oklahoma.

In this same spirit of constructive dialog, I will tackle some introductory remarks from three different angles.

First, I’ll suggest sixteen of the briefs that are especially germane to the state’s 21<sup>st</sup> Century growth and life quality.

Second, I’ll point out some topics in which two or more authors appear to be reaching conflicting conclusions. A major purpose of the Town Hall is to examine such alternatives and search for consensus.

In a third section, I’ll suggest a few important issues that are either not treated within the set of briefs or which are arguably not given sufficient attention.

## SUGGESTED PRIORITY READING

I provide this set of suggested priority readings with no intent to slight any of the authors, but rather with an awareness that some readers will not have unlimited time to digest the products of all authors and text. All page references are to Volume 2 - unless otherwise noted.

### **Social**

- Compared with national norms, Oklahomans are relatively unhealthy - a condition often caused by unhealthy behaviors (Crutcher, p. 6).
- Oklahomans rank poorly regarding indicators of child health, education, and well-being (vonBargen, p. 30; Roberts, p. 63).
- Oklahoma faces challenges in educating and retaining persons with high levels of educational attainment (Risser, p. 13).
- The state is not ready for the demands of the aging Baby Boomer population; seniors must make informed decisions and stay active and healthy (Blair, p. 37)

### **Technological**

- Promoting technology based economic development in the 21<sup>st</sup> Century requires solid educational infrastructure (Campbell, p. 82).

### **Economic: Private Sector**

- Entrepreneurs are critical actors in the process of community and economic development (Low, p. 106).
- Inadequate venture capital resources are an impediment to Oklahoma economic growth (Main, p. 109).
- It is wise to have economic development strategies targeted to growth industries and to industries in which Oklahoma has a proven advantage (Snead, p. 122).
- Regionalism is a new paradigm for economic development strategies in an environment in which human capital has become a major determinant of location (Williams, p. 112).

- Economic freedom best allows the private sector to generate wealth and prosperity; freedom is superior to the one size fits all “engineering” approach of governments (Pjesky, p. 90).

### **Economic: Public Sector**

- Oklahoma’s state government revenue system rates well regarding stability and is fairly competitive with other states (San Pedro, p. 114).
- If state government engaged in multi-year budgeting, it would be more sensitive to the likelihood of a future structural or chronic deficit (Blatt, p. 99).

### **Environmental**

- There is an estimated \$5 billion need for water/wastewater infrastructure investment over the next 20 years in order for municipalities to meet federal requirements; the days of cheap water are over (Dorrance, p. 136).

### **Political**

- Oklahoma must elect officials “who believe in shared opportunities and shared responsibilities” as was the case in Oklahoma City’s MAPS program and the Oklahoma Health Center (Walters, p. 176).
- Oklahoma needs constitutional change to reorganize the structure of state government to empower the Governor as a true chief executive; government agencies must reinvent themselves and become more innovative (Kickham, p. 187).

## CONFLICTING POINTS OF VIEW

As would be expected with such an experienced set of authors, there are instances in which there are conflicting points of view. Here are three examples.

- Oklahoma’s commitment to creating a \$1 billion EDGE (Economic Development Generating Excellence) fund is supported by Risser (p. 13) but is rejected by Snead (p. 122) who argues that this is an inefficient policy

tying up a large amount of risk capital in a modest-earning endowment.

- Requiring college preparation as the default curriculum for all high school students is supported by Paddock (p. 184) and Berkenbile (p. 25), and is viewed favorably by Risser (p. 13) who asserts that the same preparation should be required for students to be either work-ready or college-ready. However, Stratton (p. 35) supports a separate vocational track.
- Some of the recommendations for large scale commitment of public and private financial resources do not conflict directly with each other, but rather raise doubts as to whether Oklahoma could afford all initiatives at the same time. Prescott (p. 84) emphasizes a significant initiative in biotech, while Lapolla (p. 1-39) and Knutson (p. 1-43) both propose extensive energy-related projects.

#### **Additional Issues**

Given the wide panorama of people and institutions across Oklahoma, it is not surprising that sixty-one research briefs have left out some elements. Here are a few additional issues.

- **Public Education** - Articles by Deskin (p. 28) and Lapolla (p. 1-41) present advantages of charter schools. But more dialog is needed. There is a profound ideological conflict between the main line supporters of public education and conservatives pushing charter schools, vouchers, tax credits, home schooling, and a variety of subsidies to private education.
- **Tulsa-Oklahoma City Collaboration** - While regionalism is introduced by Williams (p. 112), there is no discussion of the growth-generating benefits of collaboration between the state's two dominant metropolitan areas. Are there fundamental conflicts that need to be overcome? A related issue involves conflicts between rural areas and the metropolitan areas.

- **Municipal Finance** - Vreeland (p. 179) points out that cities must rely on the municipal sales tax to fund general government. He expresses irritation about the state granting excessive sales tax exemptions. But he doesn't go far enough. Nor does Dorrance (p. 136) in her discussion of financing municipal water/wastewater needs. In the long term, municipalities in Oklahoma will face severe fiscal stress if they must continue to rely so heavily on sales tax revenues.
- **Diversity in the Public Sector** - Broadening the diverse base of public sector participation needs special emphasis. Minority groups and women present special points of view as they serve as elected officials and as they participate in other public leadership roles. This is implicit in the discussion of African-Americans (Johnson, p. 49), Hispanics (Martinez, p. 54) and American Indians (Campbell, p. 96).
- **Comity** - Oklahoma's political rhetoric is increasingly dominated by cultural and religion-based issues on which reaching a consensus is difficult if not impossible. These issues, for the most part, have very little relevance to long term economic growth and quality of life. Dialog frequently becomes acrimonious, and perhaps such issues should be left out of Town Hall discussions. However, implementing effective 21<sup>st</sup> Century strategies requires that Oklahomans talk seriously with each other.

The decline of comity both at the national and the state level should be a matter of great concern. Absence of comity was especially evident in the 2006 session of the Oklahoma Legislature. How do Oklahomans manage to disagree without being disagreeable? Can this Town Hall session explore means for helping Oklahomans to come together in the search for middle ground?

## ***What Makes A State Great?***

*Alexander Holmes, PhD, Regents Professor of Economics,  
University of Oklahoma, Norman*

***“ Brand new state!  
Brand new state, gonna treat you great!”***

*Dr. Lex Holmes is a Founding Board Member of the Oklahoma Academy for State Goals and has been a Board member since 1985. He was the Conference Coordinator of the Academy's first two conferences in 1985 and 1986 - and an important planner for our 2000 conference on the Oklahoma Constitution.*

*Lex was the winner of the Charles and David Koch Prize for Better Government Contest of the Oklahoma Academy for State Goals, “Restructuring County Government” with Frederick Drummond, 1996.*

*Dr. Holmes served as Governor Bellmon's Director of State Finance and has been an influential advisor to countless officials, agencies and organizations. His CV is 11 pages. Like they say, “he's been around”.*

*We asked Dr. Holmes to partner with Dr. Larkin Warner to provide previews and insights to this Town Hall topic and to the various elements of this research compendium. Dr. Holmes also agreed to let us publish elements of a three hour interview we had with him concerning Oklahoma's past, present and future.*

*The Academy thanks Dr. Holmes for his 21 years of service to the Academy and to the state. And we thank his wife (Laddor) and dog (Dundee) for sharing some of his time with us.*

The assignment taken on by this intrepid group of volunteers was to search their crystal ball and propose policies that would propel the state of Oklahoma into its next century. Importantly, each proposal was to contain measurable metrics of progress toward each goal.



The role I have been asked to fill would seem to be that of curmudgeon: something between cynic and preacher. I do not ask any longer why I get such assignments or why I accept them. Nevertheless, please take what follows in this vein.

Most of the papers seem to believe that what makes a great state is more state money for their pet projects.

Almost none mention the private sector except to say they need tax breaks or more government subsidies.

The non-profit sector and all the services they provide is all but forgotten, except in one case to ask for government money.

The papers on politics seem to have the common theme that all is well or in ruins.

It was the farmers that seemed to have the real issue before them. As stewards of the land we heard from conservationists and others about the FUTURE. About preserving and, protecting and even exploiting in a passive way (wind power for example), but always it was the future that was upper most. We heard about preserving, learning and cherishing our past history and culture, not for the narrow goal of consumerism, as in some

proposals, but for the loftier goal of self-awareness and self-identity and self-worth.

In all, we have been treated to something between a brow-beating and a pep rally.

So the question still stands...what makes a great state and how might it be measured? Each paper, like the group blind men describing their part of the elephant, gives their particular impression. With all humility, and drawing upon the yeomen's work set before us, I will try to provide a broader view and suggest measures of progress or failure.

In short, one requires some sense of the goal, the broader goal, in order to measure progress toward that goal. What these papers provide is "projects" that would move the state forward; what I will try to provide is a broader sense of what the final product of what a great state might look like.

### ***1. A GREAT STATE TAKES CARE OF ITS WEAKEST MEMBERS FIRST AND FOREMOST***

Abused children...the state manages the life of thousands of children who are taken from their parents. If we can spend millions on advertising the lottery why can we not spend some to help adoption of these children to provide them with greater stability? Why can we not partner with other states in adoption? *SUGGESTED METRIC: Number of children in foster care, number of children adopted.*

Where do abused children come from? Mostly drugs and mostly babies having babies and truly mostly the combination of the two. Teen birth rates in Oklahoma have been an embarrassment to the point that now we accept it. There is no shame in unwed pregnancy as there once had been, but the human tragedy is no less than before. *SUGGESTED METRIC: Teen birth rate*

Research shows that much of the teen birth rate can be attributed to "fathers" much older than the

mother. This is an exploitation of these girls and the statutory rape laws need greater enforcement. *SUGGESTED METRIC: number of statutory rape prosecutions.* Perhaps one could set as a goal the equality between the number of teen births and the number of statutory rape cases filed.

The elderly, and there are more of us coming very soon, are one of the most vulnerable groups in our state. Fraud units in the attorney general's office, insurance commissioner's office and at the securities commission need to be prepared for the coming group. *SUGGESTED METRIC: Crime statistics specific to crimes against the elderly.* Nursing home scandals are so common that they do not even make a top news story on any day with a good fire. Vigilance is the only safeguard for our most frail and fragile. *SUGGESTED METRIC: Nursing home unannounced inspections and numerical scores for infractions found.*

Minorities of all flavors likewise require vigilance to preserve their rights, dignity and opportunities. *SUGGESTED METRIC: Measures of academic achievement, economic progress, and contacts with police specific to minority groups by various categories of minorities.*

### ***2. A GREAT STATE PROTECTS ITS NATURAL RESOURCES***

The natural resources of a state are a bequest from those who came before us. We are simply stewards of these resources. Oklahoma's history of exploitation with little regard for the consequences is the stuff of legend; zinc, coal, oil and gas, and water. Our forefathers have left us with a huge bill to pay. *SUGGESTED METRIC: Air and water quality indexes, aquifer capacity and sustainability measures.*

### ***3. A GREAT STATE PROVIDES FOR ECONOMIC OPORTUNITY FOR ALL ITS CITIZENS***

Without growth there can be no opportunity for coming generations. One can never reconcile the

desire for “I wish things could stay the way they are” with “Why can’t my children and grand children find work and live closer to home?” Growth is the only path to absorb the new population without destroying the living standard of those here now. *SUGGESTED METRIC: Measures of per capita personal income with special attention to geographic differences and ethnic/racial differences.*

Providing economic opportunity does not mean that the government should be paying for jobs through tax credits and subsidies. A subsidized job is a job that is non-economic, meaning the market did not want that job there and would not put that that job there without being paid to do so and, further, will not leave that job there if the subsidy is removed.

A great state creates economic opportunity by promoting fairness and confidence in the ability to contract, the highest ethics in all matters of law, regulation, and licensing.

A great state provides the resources for its citizens to be prepared for opportunities, and fundamentally this is accomplished through education at all levels.

#### **4. A STATE SACRIFICES FOR THE BENEFIT OF THE FUTURE GENERATION**

But a great state must move beyond just protecting its weakest members and beyond care of its natural resources. It has to provide for opportunities to truly excel for each of its citizens individually. A no-growth welfare state can not sustain a dynamic population in an open economy.

Providing for the future generation is not costless. Education, roads, all government services are expensive. If provided in the private sector they are still expensive, just the payer changes. A great state will willingly provide for the future without individual regard for some private return. There is no cost/benefit analysis that will give a positive answer for the elderly to pay more for school

taxes, or for childless families to pay the same school taxes. It is simply a willingness to sacrifice for some common weal; some agreed upon social contract that we are more than the sum of our individual net costs and benefits.

The obvious measure of the potential of future progress for a state is the foundation education provided our next generation. *SUGGESTED METRIC: Measures of real progress through our elementary and secondary schools. This includes measures of learning and completion rates. The rate of continuance to higher education of our Oklahoma high school graduates.*

Beyond elementary and secondary schooling Oklahoma provides through both the public sector and private sector an array of institutions of higher education. *SUGGESTED METRIC: The graduation rates at these institutions.* (It has been noted that we ought to measure the success of our institutions of higher education by how many graduates remain in Oklahoma. I reject this measure for that same reason I support the School of Science and Math knowing that their graduates will in high percentages leave the state for college: a great state helps its citizens soar regardless of where they chose to land.

All of us here have, at least implicitly, some mental picture of Oklahoma as a GREAT state. Each category I suggest is that only, a suggestion, a starting point for discussion. It embraces a sense of a common weal, a common vision against which various metrics can be cast. It assumes that discussion can occur without prejudice and favorites. And that disagreement can occur in principle without foreclosing further discussion.

Each paper provided herein may best be viewed as a part of one person’s vision. The great service provided by each author collectively is the number of pieces that are presented and the wide array of topics covered. There are conflicting views and no overall sense of priorities, but then that, of course, is the role of the Academy Town Hall and why you attend the meeting remembering always the guiding principle: *non sibi*. (Not for oneself)

## *Q & A With Lex Holmes: Eschewing Obfuscation*

*Craig Knutson and Alexander Holmes, PhD, Regents Professor of Economics  
University of Oklahoma, Norman*

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While the debate continues inside and outside economic circles, I still consider Alan Greenspan to be one of, if not the best, Federal Reserve Chairman of all times. His brilliance aside, I was always amazed at how he kept—most of the time—markets under control by making bad news opaque. My all-time favorite quote of his goes: “If I seemed unduly clear to you, you must have misunderstood what I said!!” Believe me, while I have always found “Lex” to have a brilliant mind, he has, unlike my favorite Federal Reserve Chairman, been unmistakably clear, as he was when I sat down with him one Saturday morning this past June to allow the “prophet to preach.”

CK: So Lex, the first statewide economic development plan was developed during the Bellmon Administration, with many items (creation of the Department of Commerce, Oklahoma Futures, Private Activity Bond Cap, etc.) found in HB 1444. Not one article in our Resource Document really addressed the need for a statewide plan and blue print. Your thoughts?

LH: I’m not much of a long range planning type of guy. They tend to chew up lots of time and create acrimony. In fact, I guess you’d say I am hostile to these types of things.

And so we began. Lex did allow for the fact that biennial budgeting (multi-year), especially for long-term capital projects (water, transportation, etc.), is critical because it creates discipline. But we live crisis, to crisis, to crisis . . . and long range planning does not get rid of the crises. He concluded with “it’s almost pro forma for a Governor to come in and put a lot of people together to develop a blue print, which in the end fails due to the lack of political will and scarce financial resources.”

That was more of an overarching question. I tried to align my questions along the STEEP factors, so I asked several **SOCIAL** questions.

CK: In the area of education, do you feel we, as Oklahomans, are getting a fair return on our investment?

LH: I don’t know, to tell you the truth. But given some of the outcome measures that we have, one could say that Oklahomans are getting what they pay for! And that is sad.

As Lex mentions in his companion piece, we need to be sacrificing more now to achieve higher educational returns for years and decades to come. His real bone of contention revolves around our dependence upon “averages,” which don’t highlight the real educational tragedy: abysmally poor educational outcomes for our minority groups. We can’t say we have achieved educational excellence until we have gotten that right (improved outcomes among our minority populations).

CK: And what are your thoughts about the high teen pregnancy rates in Oklahoma?

LH: Let me remind you that you can only count BIRTHS, so trying to count “pregnancies” is misguided (Lex is always teaching!). But, to your general point, the statistics are a social tragedy, “an abomination,” and a classic case of exploitation. If you really dig into the data, what you find is 13, 14 15 year old girls being exploited by 22, 23 year old men. I’ll feel better about this situation when there is parity: one indictment for statutory rape against each man, for each illegitimate teen birth.

CK: You’ve been in Higher Education for quite a few years, (Lex interrupts)

LH: I just got a chair the other day!

CK: You did, congratulations!!

LH: No, not that kind, just a wooden one. They give you one once you have been here 30 years!!!

CK: You have mentioned the importance of the work force in establishing a comparative advantage for this State. Given your 30+ years of teaching, what can you tell us about the quality of the students who attend your classes?

LH: They're great, they are really pretty wonderful. And by the way, we're importing a whole lot of truly remarkable students. Two of my brightest students' – one from Joplin and one from Memphis – have made significant contributions while at OU.

Having said that, Lex also countered that there are a host of problems he sees with incoming freshmen, and he lays it at the doors of the high school systems across this state. His biggest complaint: they are negotiators, especially when it comes to grades. He cited a rather humorous example of a student who had received a 78 on an exam Lex had graded, and asked to meet with him about it. The student's statement to the fully-tenured, 30+ year experienced professor: I have reviewed this exam, your grade and comments, Dr. Holmes, and I believe this paper deserves an 85 or 86!! What can I do to improve this grade? Lex's remark: You mean your FUTURE grade, right? Do you expect the airline to bring back the jet because you missed your flight? The jet is gone – prepare yourself for the next flight!!!

Other issues that irritate him are the rudeness associated with cell phones and e-mails. Space does not permit the stories where “common civil discourse” in the classroom has been violated.

On **Technology**, Lex surprised me somewhat. When asked about our ability to compete in a rapidly changing technological and global market, and where we might place our emphasis, Lex

replied: I do not like to guess the future and thus fail to present a diversified portfolio of skills to the future market. He did opine that while biomedical and energy research is very promising, agricultural research, especially value-added agriculture, might have the brightest short-term future. The value-added processing of pigs, chickens, and cattle, using our waterway system to export to the world, holds the greatest short-term promise for Oklahoma. And everyone thought it would be grains!! “We all have to eat, you know!” And he has no problem with genetically-engineered crops and would encourage OSU (and others) to pursue research dollars and activities along those lines.

On **Economic** issues, an area I would have thought would have dominated the discussion, the following was addressed.

LH: As previously mentioned, I am a real proponent of multi-year budgeting. I strongly believe that a broader tax base is essential to effectively running State government and smoothing out the revenue cycles by which we are consistently whip-lashed. In fact, in 1987, the Bellmon Administration attempted to balance the budget by broadening the tax base and lowering the tax rate (sales). “It makes all the sense in the world.” His belief is that a “tax that alters behavior as little as possible is the best tax.”

Asked about the resurgence of Native American investments, he wryly commented: “I’m always chagrined when I see an Indian car tag because all I can think is some school district got less money.” Which led to a discussion of the efficacy of using tribal lands and tax breaks to attract out-of-state companies (e.g. the new MG plant): “if we all have these tax deals, then there is nobody left to subsidize local services.” In the extreme, you have an infinite number of jobs and zero government services. He opined: I would assume that those 300 jobs, will have 2.1 children per family, and will need to drive on local streets and attend high quality public schools? What happens to the tax base under these conditions?

On the topic of energy prices and the nationalization of oil/gas resources internationally (Venezuela, Russia, etc.), “the pendulum appears to moving back in the other direction.” And by the way, the early 1980s energy bust had a long-term impact on Oklahoma’s wealth – our royalty checks, which saved many a farmer in Western Oklahoma, were bought up by those in Connecticut and points east and west; those royalty check now have different owners, lessening the residual benefits of the current energy price boom in Oklahoma. And given the drought conditions in Western Oklahoma, he is concerned about the economic damage occurring.

On jobs: Who said you can’t move service-sector jobs off-shore? “Have you been listening to your phone recently? I was trying to book an airline reservation to St. George, Utah, from Oklahoma City, Oklahoma, and I’m talking with someone in New Dehli to get it done.” Everything is fungible in the global market place and for Oklahoma to compete, we must have comparative advantages: a fair tax system, efficient transportation networks, a strong labor force, and honest government. These are critical to our survival.

**Environmentally**, Lex outlines his thoughts quite nicely in his companion piece. However, he did emphasize one item in particular. When I asked him about the volatile issue of selling water to Texas, his first statement was: and what’s the alternative, sell it to Oklahomans!! His real concern has to do with aquifer recharge rates: “I’m very anxious about depleting our aquifers.” But, as long as our recharge rates are sustainable, who buys it is irrelevant!!

Finally, on the **Political** front: “I don’t know when I have been more disappointed with Oklahoma politics than I have in the last week and a half (June 24).” He was referring to the pandering for the position of Lieutenant Governor: “A nothing job; it’s a zero job; it shouldn’t exist; it has no official duties.” And yet they are “bad-mouthing each other in the gutter for nothing and confirming

the public’s worst feelings toward government in the process.” Are you clear on his position?!?!

He was disappointed with this particular area of the Resource Document. He failed to see anything that dealt with ethics and the overall structure of government. What he read was “rah, rah, things are great,” but given the dependency most cities have on sales tax and the high tax rates many of them have, he was disappointed that a more “cogent discussion of funding options” wasn’t addressed. Reducing or eliminating the sales tax on groceries would be beneficial to many a struggling Oklahoman, but what a devastating impact that would have on the future of so many small towns.

Lex does view the real conflict in the Legislature as one of urban-rural, as opposed to Democrat vs. Republican. Yet, on rural lifestyles (bucolic, less congestion, lower crime), “don’t ask me to fund your lifestyle! Craig, cities have been turning into ghost towns since the turn of the century; why should we subsidize a dinosaur.”

There was so much more, from prisons (we lock Oklahomans up for too long for too petty of a crime) to drugs (they are pernicious, they devastate lives for generations, and I don’t have an answer), to the importance of the non-profit and religious sectors (they are the safety net for the weakest among us).

At 9 AM that Saturday, I was met at the front door by his beautiful wife Laddor and frisky pet, Dundee. I felt a great deal of uncertainty and anticipation. As I left through that same door, with one of Oklahoma’s most educated observers by my side, I felt not only relieved but enlightened. I felt I was better prepared to identify and address potential barriers to making Oklahoma a GREAT STATE.

Thanks, Lex, for allowing me my own personal Chautauqua with you.

## Our “Ribbon Train: - Eight Years Later

Craig Knutson, Research Coordinator  
The Oklahoma Academy, Norman

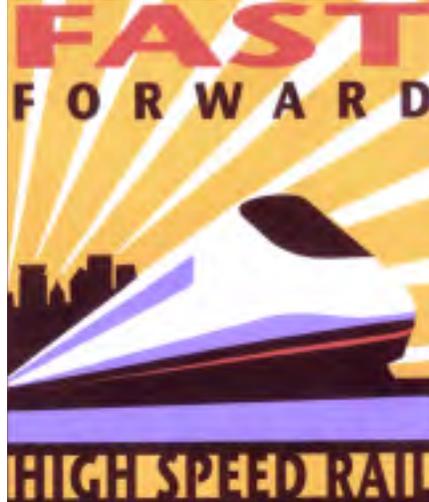
George Ellogy was a character I created for the Prosperity Unleashed scenario. George was created to represent a vision of what I/we hoped more Oklahoma youth might become – better educated, confident, engaged in the present, and more thoughtful about their futures.

George was from Dewey, a small rural enclave in NE Oklahoma, but he interned at a Fortune 500 company (Phillips, now Conoco-Phillips) and traveled the bullet train (The Ribbon) to rub shoulders with and to learn from the brightest and most influential at the University of Oklahoma’s Academic Hall of Fame.

The more philosophical opine that “you must first visualize to then realize.” There are no time constraints to this view, but eight years after creating George, I wonder how close (or far away) we are to joining George on the “Ribbon Train.”

The greatest constraint to “Ribbon Realization” seems to be cost. Yet, according to a report developed for the Southeast High Speed Rail Corridor, “reconstructing, upgrading, and constructing rail lines between Washington and Charlotte is estimated to cost \$2.6 billion, or about one-third less per mile than similar interstate projects.”

Costs for new construction vary from state to state, and with Oklahoma’s relatively inexpensive land and construction costs, the overall costs for such a project would be modest by comparison.



But the benefits, especially given the growing concerns of global warming and the historically high gasoline prices for private transportation vehicles, are numerous and compelling.

According to the Environmental Law and Policy Center, high speed rail (HSR) has a number of environmental, transportation, and economic plusses, which include:

- HSR pollutes less than both cars and airplanes, thus improving air quality (a growing problem in both OKC and Tulsa);
- HSR is three times more energy efficient than cars and six times more energy efficient than air airplanes;
- HSR will, as our major metropolitan areas have demonstrated, pull jobs, people, and businesses back into our major metropolitan areas, both of which have major downtown investment plans currently in progress;
- at distances of less than 400 miles (approximately 110 from downtown OKC to downtown Tulsa), HSR can deliver you downtown-to-downtown in less time, at a fraction of the cost, and in virtually all weather conditions;
- HSR systems are a safer and more reliable form of transportation; in Japan, with over 40 years of operational experience and billions of

passenger miles, their trains have had no fatalities and have arrived, on average, within 24 seconds of schedule;

- with wide seats, fax machines, places to plug in your laptop computer, and food service, HSR is actually more convenient and allows for greater productivity than either cars or planes;
- HSR stations can become the focal points for commercial redevelopment and promote substantial new development in surrounding areas (e.g., Washington, D.C.);
- that development often leads to higher property values in and around HSR stations, a major revenue source for our K-12 school systems;
- HSR networks pull together regional economies and promote intra-regional business growth (this is a major theme within the “Economic” section of this Resource Document);
- the development of HSR service can provide a significant boost to travel and tourism, facilitating weekend leisure trips to and between stops along the line; and
- HSR construction costs run significantly less than the cost of highway construction.

Major infrastructure projects like this require vision, patience, and a long-term commitment to Oklahoma’s future, for the timeframe from start to finish can run 8-12 years. But as a commuter that travels from Norman to OKC and back each day, I can’t remember the last time I-35 WASN’T under



construction. So, it could be said that, I-35 has never really been completed!! For a state that measures success by job and income growth, which all but necessitates an increase in population, how, pray tell, can we fit even MORE vehicles on the Turner Turnpike, without

generating greater congestion, increased fatalities, and greater pollution. HSR offers a proven, reliable, and STEEP-improving solution, should we act NOW. And apparently, even the U.S. Government, back in 2001, had OKC and Tulsa in its planned vision (see accompanying map).

When Mike and I developed the guidelines for our authors to follow, we were each encouraged to think big, be bold. Perhaps we took “ourselves” too seriously! I’ve made my case for a major energy plant that is not in our current portfolio and that is environmentally more attractive than any of the resource-based alternatives, save wind. Perhaps George will be the scientific architect behind the development of Oklahoma’s first nuclear energy plant. I have now made my case for a major infrastructure investment that positively addresses each of the STEEP factors we’ve used as a backbone for this Town Hall. Isn’t it time that we made George’s trip to the Academic Hall of Fame a reality.

Dreaming big is an essential first step to achieving great things. If we are going to “bend the trends” of lackluster performance, a BIG DREAM is important.

There is a famous saying from Frenchman Antoine de-Saint Exupery that reads: “It is not for us to forecast the future, but to shape it.” Don’t leave the Town Hall without sharing YOUR dream for Oklahoma.

## *July 13, 2006 - A Day in the Life of Oklahoma*



You may ask “Who are the authors in this book? Why did the Academy ask them to comment upon Oklahoma’s social, technological, environmental, economic and political issues? Why are the topics relevant. Why don’t we talk about the ‘real world?’”

Consider the July 13 edition of The Daily Oklahoman. The front page had four articles of interest to this Town Hall. One cites the building of a new MG automobile plant by the Nanjing Automobile Group Corp (China) in Ardmore. It quotes Wes Stucky of the Ardmore Development Authority - an author in our Economic section. The Ardmore High School is also featured in our Technology section.

In two related articles we see the Nanjing decision influenced by the Chickasaw Nation. This research has two contributions by the Chickasaws - both authored by Brian Campbell, CEO of Chickasaw Enterprises. One is in the Economic section and another in the Technology section.

And there is the article concerning a research by-product and potential at the University of Oklahoma who will host the research facility of Nanjing. This facility will be built on campus in Norman. And the Nanjing headquarters will be in Oklahoma City.

Finally, the same paper announced that the Sac and Fox Nation is partnering with SemGroup to consider the feasibility of a \$4 billion refinery construction project. This proposal is similar to two proposals at the beginning of this book - not as broad and sweeping - but \$4 billion is pretty big!

So, if you question the relevance of the Town Hall - or those who are participating - worry not. July 13 was one of many days validating Oklahoma Academy thought and action.

## *July 13, 2006 - A Day in the Life of Oklahoma*

### ***Central location cited in plan to add 325 jobs for assembly factory***

By Adam Wilmoth

Automaker MG Motors' decision to move its corporate headquarters to Oklahoma City was touted as a victory for all of Oklahoma on Wednesday.

Perhaps the largest benefits, however, are directed to Ardmore, where 325 jobs will be created at MG Motors North America/Europe Inc.'s production and parts distribution facilities. Even more than the jobs, local economic development leaders celebrated the announcements as a validation of their campaign to attract different kinds of jobs.

"It's an exciting day for Ardmore as it is for all of Oklahoma," said Wes Stuckey, president of the Ardmore Development Authority. "Clearly, it will be another shot in the arm for our diversification efforts that already have been quite successful."

### ***MG site at OU hailed in Norman***

By Tami Althoff

NORMAN - The University of Oklahoma will be home to an engineering and research facility for Nanjing Automobile Group Corp., a Chinese automaker that plans to revive the MG sports car.

The plans were announced Wednesday during a luncheon at OU's Kerr-McGee Stadium Club. OU President David L. Boren said work on the "state of the art" center would begin immediately.

"We're excited. We're going to start drawing plans right away and moving dirt as soon as possible," Boren said.

### ***Tribe considering refinery in Cushing***

By Adam Wilmoth

The Sac & Fox Nation and a subsidiary of Tulsa-based SemGroup Inc. are studying whether it will be economical to build a crude oil refinery in Cushing. Chief Kay Rhodes said the tribe is looking at the option as a way to both benefit Oklahoma and the country while also diversifying the Sac & Fox's sources of income.

### ***Tribe profits from status***

By Tony Thornton

ARDMORE - Once again, Oklahoma's unique land status has blessed the Chickasaw Nation.

The tribe's proximity to Interstate 35 — the highway runs through five of 12 counties in the tribe's jurisdictional area — has prompted construction of several casinos that made the Chickasaws rich the past five years.

Flush with gamblers' money, the Chickasaws are buying more land near I-35 and entering the international trade realm.

A Chinese automaker will revive the British sports car brand MG on land the tribe plans to purchase next to the Ardmore Airpark.

Neal McCaleb, a consultant for the Chickasaw Nation, sees that arrangement as the first of many as the tribe seeks to establish a manufacturing and distribution hub in southern Oklahoma to rival the Alliance Airport area, north of Fort Worth, Texas.

"It's not just a vision. It's a plan," McCaleb said.

## A “Blue Chip” Proposal: Raise The Ante - or Bluff?

Michael Lapolla, Research Coordinator  
The Oklahoma Academy, Tulsa

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*Editor Comment: Several individuals and groups have recently suggested “building a refinery”. Legislation has been introduced to facilitate and fast-track such a development. There has even been talk of a Native American tribe being central to the effort. This proposal acknowledges that others have similar thoughts - and have so for years. We recall Mickey Thompson (OIPA) suggesting a “new refinery” at our Town Hall several years ago; Dewey Bartlett did the same at our 2006 Forum. So - this proposal is not necessarily new. But the scope and scale of this proposal is what will make it “transformational” as opposed to another marginal effort with limited support. The theme of this proposal is to “if you want to make money - play your ‘blue chips.’”*

Nothing is more uncomfortable than watching someone try to be who they aren't. We say “they are just fooling themselves.” The same applies to states. On the other hand nothing appears more natural than people making the best use of their talents. We say “look how competent they are.” The same also applies to states.

Oklahoma will never be many things. We will never host surfing championships, sponsor mountain climbing expeditions, produce volumes of citrus, replace Detroit in vehicle production, to be America's seaport. And why should we waste time and effort trying?

Common and generic approaches – such as “improve education” – have no logical end game in economic development. While education is a critical component of successful ventures – education for education's sake merely creates products that serve others elsewhere.

Perhaps it is best to capitalize on our strengths, minimize our weaknesses, maximize opportunity and avoid threats. What a concept! We learned that in Life 101. Perhaps it is best to leverage our

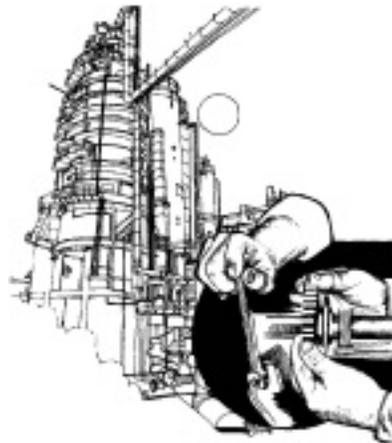
advantages to naturally do the best we can and not waste time trying to be who we are not. To paraphrase former Governor Nigh... “we should do the best we can with what we have where we are.” Amen.

### Strengths

So. Let's take stock of our advantages. We have a rich energy legacy and a strong energy production culture; we are home to scores of Indian tribes with their limited sovereignty rights; our geographic location is central and non-coastal; we are small enough to get things done and big enough to make a difference. We have land and an “agri”-culture – and two growing seasons.

### Weaknesses

We do not have a state culture that is conducive to attracting the “creative” classes in great numbers; not do we have the concentration of assets to become a major financial and commercial center. Our education systems are adequate but will likely never rival coastal areas that have a 200 year head start and enjoy advantages of population concentration. We can struggle mightily to change these realities; or we can minimize their effects and save our strength for other opportunities.



## Opportunity

In today's world, it is painfully obvious that world-wide energy demand is increasing and will likely to continue to do so indefinitely. China and India are seeing to that. A few billion new customers certainly increases demand - and therefore price. It is clear that our nation is stymied concerning energy production policies and increasingly vulnerable to foreign sources and unexpected disasters such as coastal hurricanes. And it is clear that only a major coordinated effort by those who know what they are doing – is going to help us as a state and nation.

Energy can mean many things beyond oil and gas. The group(s) that provide the most of it at the least cost are the winners. Oklahoma can do this. Oklahoma can be a national and world player in the energy game and can do so by naturally using our talents. But it cannot be done by any single corporation, political party or governmental entity. It can be done with many collaborating as “shareholders”.

## Threats

Oklahoma may continue an unwritten policy of artificial equity, unrealistic populist sentiments, reliance upon government for too many services and just screwing around. Should that occur as a matter of policy, we will...to paraphrase Ronald Reagan...will be “assigned to the ash heap” of states that simply provide raw products (educated people and unrefined commodities) to other parts of the nation and the world.

## The “Energy Campus”

The centerpiece of the campus would be America's first 21<sup>st</sup> century refinery – capable of refining a series of products into usable energy – whether it be gasoline, jet fuel, ethanol or electricity. Wrapped around this centerpiece would be a

## PROPOSAL

*It is proposed that a world class energy production and research campus be built and operated in Oklahoma; and that this campus be operated by a public-private authority with governance provided by the most energy and business savvy Oklahomans.*

branch campus of the Sarkeys Energy Center with university/industry alternative energy projects. Offices and warehouses of suppliers would be serviced by a network of pipelines, air terminals and roads and rail. Oklahoma's

farmers would have the opportunity to sell products for energy production – and would benefit from the cheaper energy produced.

Such a project would be jointly financed and operated by six major investor groups and stockholders. They would be Oklahoma Indian tribes; Oklahoma financial institutions; Oklahoma Public pension programs, state government, major energy companies and private investors with preference given to Oklahomans.

The location of this campus would be on lands that enjoyed Indian-related sovereignty to accelerate responsible environmental planning; perhaps be located in northern Oklahoma to maximize access to North American pipelines; rely upon invested capital from tribes, pension funds, and financial institutions; assign government the role of coordination and collaboration planning and infrastructure improvements; and concentrate the best and brightest energy minds in Oklahoma in a single place. Additionally government would be expected to create partnerships with other states (New Mexico?) for other purposes (hydrogen cell research?) as opportunities arise.

## Summary

If Oklahoma is going to “bet the farm” and pursue opportunities that make both sense and cents, then we are going have to play our best blue chips in selected institutions, governments, people, capital and organizations that can make world class energy production happen.

**Do we play these blue chips – or do we bluff?**

## ***Is It Real Change - Or Just Kidding?***

*Michael Lapolla, Research Coordinator  
The Oklahoma Academy, Tulsa*

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***“When school children start paying union dues, that’s when I’ll start representing the interests of school children.” Albert Shanker, President, American Federation of Teachers, 1975 - 1997.***

Now there is a “helpful” thought! And too often it embodies and typifies the shrill and partisan debates over public education. We don’t know about you, but that debate has become – BORING. Regardless of the participants, every one seems to know the “next line.” Not only that – but fixing responsibility is like grasping at air.

There are five primary groups of participants in this theater: parents, teachers, students, education administrators and school board members. You can add others – like “the public” or “employers” – if you wish. Our mental image of the “debate” is of each party pointing multiple fingers, sometimes middle fingers, at each other – and screaming. Please. Enough. Let’s stop the madness. It’s boring and hurts our ears.

For the purposes of this brief paper, let’s stipulate that no single group is at fault; no single group can fix whatever we think is broken; that there is more good than bad; and meaningful and positive change cannot happen in a traditional way – or it would have already been done. Fair enough. Oh— one more thing. We don’t know if public education has too much money or too little. Let’s just agree that it has what it has and let’s deal with that. It may not be enough – but when considering all the countries in the world it ought not be considered inadequate. And given that so many schools and districts do very well – let’s not get distracted.

### **The Academy and Education**

The Academy has a long history of supporting responsible education reform. It was the original incubator for the House Bill 1017 reform measures fifteen years ago. It’s membership has traditionally had a loyal representation from public education.

Did you know that the very first recommendation from our very first Town Hall was “to create a culture of learning in Oklahoma”? What is most interesting about that primary recommendation is that the Town Hall theme was NOT education. It was “Competing in an Innovative World”. The Town Hall organizers vowed to not become involved in the education debate – yet the process yielded the leading recommendation of Oklahoma must create a—“culture of learning.”

Subsequent discussion about “how-to” create such an environment lead to the following specific recommendation

**Oklahoma should create a competitive demonstration grant competition to create charter-like school districts that best serve the educational needs of the 21<sup>st</sup> century.**

The details are as important as the recommendation. Here are some of them:

- Oklahoma sets aside \$100 million (pick a number) to finance the grant competition.
- Grants in the amount of 20% of the pool will be made to four school districts. Two will be rural and two will be metropolitan.
- Written narrative application will be no more than 1,800 words; and the application must be submitted orally by a district team that includes at least one teacher, student, parent, administrator and school board member; each team member must both present a portion of the proposal and answer questions from the selection committee. The oral presentation will be rigorous.

- The selection committee shall be comprised of the most prominent Oklahomans. None of the committee will be currently employed in public education. The committee endorsement will be ratified by the Governor and Superintendent of Public Instruction.
- A selection committee will choose those districts that appear to be best organized and motivated to create the model charter school district of the 21<sup>st</sup> century.
- Selected applicants will be relieved of all current mandates, salary schedules and restrictions so as to most resemble the most successful private schools. Those districts that cannot abide by such relief should not apply.
- Selected districts will have extraordinary flexibility in using the grant funds. They may be used for merit pay; to salary enhancement; purchase equipment etc. At the end of the 5-year grant period, the district will choose to maintain the charter status using traditional funding – or revert to pre-grant status.
- The selection committee will appoint a grant monitoring team that will continuously visit each selected district and have access to all meetings and planning sessions of that district. The monitoring committee will report to the selection committee at least quarterly for the five year period.
- Twenty percent (20%) of the funds will be set-aside in an “indemnification pool”. Those funds will indemnify the district and individuals against any legal actions resulting from the implementation of charter school district principles.

This proposal is not intended to be all inclusive and to spell out every detail – or to rebut every quasi-legal argument. It’s an idea - an Academy idea. If you have a better one - let’s hear it.

But please don’t BORE us or hurt our eardrums.

### **Charter School Districts**

By Paul T. Hill

<http://www.ppionline.org/>

Across the country charter schools are becoming an established fixture on the educational landscape. Although some zealots still attack charter schools as elitist or private, overall there is a growing awareness and acceptance of these innovative public schools. In fact, discussions of charter schools now center more frequently on how the charter model can be used to leverage more widespread change. One idea attracting a lot of attention and some experimentation is charter districts — school districts composed entirely of charter and contract schools.

A charter *school* is a public school operated by an independent group under a performance agreement with a state agency, usually a local school district. Groups of parents and teachers and nonprofit community organizations may open and operate charter schools. A charter school receives public funds on a per-pupil basis for every child it enrolls.

A charter *district* is a locality in which all public schools are charter schools. In a charter district, the local school board has decided not to directly operate any schools itself, but to provide schools exclusively by working through independent groups. Thus, rather than employing large numbers of teachers, principals, custodians, and central office administrators, a charter district employs contractors — one for each school or perhaps several schools — and those contractors do the hiring, teaching, spending, and administering.

## *A Home G.R.O.W.N. Energy Future for Oklahoma*

*Craig Knutson, Research Coordinator  
Oklahoma Academy, Norman*

While the amount of “volunteer time” spent working on the Academy’s Resource Documents over the years is immense and intense, this effort has provided me with a much broader base and perspective to approach and actively participate in life’s many opportunities.

Being more than just a casual observer of this State’s progress (or lack thereof) for the past 25+ years, I thought I’d share with you one vision, focused primarily in the area of energy production and environmental sustainability . . . and no, they are not mutually exclusive. This vision had its beginning while taking graduate level classes at OU’s Engineering School in the early 70s, studying transportation (Civil) and sustainability (Environmental Sciences) issues.

The vision resurfaces with each of the following: (1) during every energy boom/bust cycle, (2) public policy calls for “energy independence,” (3) the need for a “diversified energy portfolio,” and (4) the continued scientific vs. political debates surrounding global warming. Thus, it has been at the “surface” pretty consistently for some time now.

Oklahoma has a steeped history in energy production/extraction. We are blessed with

enormous reserves of natural gas and prominent (although economically diminishing) levels of oil reserves. We are also blessed with an internationally competitive human capital base at our major universities and private foundations in the energy arena. The possibilities of marrying the former with the latter, to create a more value-added future, are clear yet unrealized.

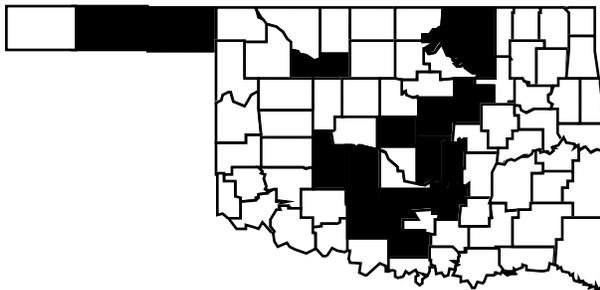
Oklahoma has 77 counties and approximately 32 of those counties are located west of I-35. Socially, there has been a tremendous depopulation in many of those counties. Since 1910, the State of Oklahoma has had TWO (2) decade-over-decade (dod) declines in population: 1930-1940 and 1940-1950.

In Western Oklahoma, the average number of dod declines, out of a possible nine (9), is SIX (6). In NW Oklahoma (I-35, west and I-40, north), there are TEN (10) counties, out of sixteen (16), that have suffered through SEVEN or more dod declines. Two of those – Alfalfa and Grant – have posted population declines for NINE CONSECUTIVE DECADES.

There is a famous saying by General Omar Bradley that roughly goes: If one person calls you a jackass you can ignore him, but when six people call you a jackass you better get the saddle out!!

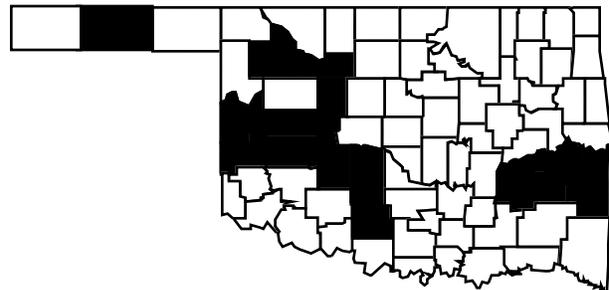
### **OIL**

Top Producing Counties in Oklahoma



### **NATURAL GAS**

Top Producing Counties in Oklahoma



The Poppers were right – much of this area, based upon its depopulation history and forecasts, is best suited for a Buffalo Commons.

Now, before I upset every farmer, oilie, economic development official and politician west of I-35, let me suggest an “alternative” future that may, in some counties, result in a reverse in these undeniable trends of “declining demand.”

I can see a future in Western Oklahoma that is focused on two critical ingredients to economic prosperity: the importation of capital through value-added exporting and the creation of high-waged jobs, that have high income and employment multipliers associated with them. That capital and those jobs will be major contributors in righting the imbalances that afflict Western Oklahoma.

We have established – for decades— that many counties in Western Oklahoma have an abundant level of energy resources BELOW the surface (oil and natural gas). Just follow Chesapeake to see how much and where!! Oklahoma ranks second, just behind Texas, in natural gas production (EIA) and seventh in the nation in oil production (EIA).

In just the past 3-5 years, we have seen a significant increase in investment capital targeting wind production. According to the American Wind Energy Association, Oklahoma now ranks fifth in the nation for its wind power capacity. Remember, in 2003, Oklahoma didn't have one megawatt of

wind power!!! According to the Oklahoma Wind Power Initiative, there are 16 counties in the State that have a “resource potential” of “good” AND “excellent.” All 16 lie west of I-35. Other renewables (ethanol, biodiesel, etc.) also hold promise and potential. Oklahoma IS an “energy state,” whether below or above the surface.

How many areas of this state's fabric can you mention where we have so many high/positive rankings? Health, economics, transportation? I don't think so. What I believe is missing from this discussion on the State's future energy portfolio is an honest and factual debate of the role that **nuclear** energy MUST play in our State's future. A diversified portfolio of energy alternatives that will guarantee electricity to in-state residents/ businesses and provide supplementary supplies to high growth markets to the north, south, east, and west is essential.

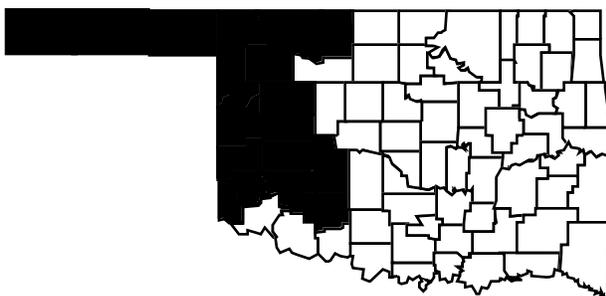
Before your brain shuts off because of Chernobyl, Three Mile Island and Yucca Mountain, let me present some rather compelling reasons why our portfolio needs to be expanded to include the nuclear option, and why Western Oklahoma might be the ideal location statewide.

Looking at this idea from a global perspective, there are over 440 nuclear energy plants worldwide, operating in 33 countries. The US is the leader, followed by France with 59 (producing 78% of their electricity) and Japan with 55 (producing 30% of their electricity).

The point is that close to 20% of the world's electrical production ALREADY comes from nuclear energy and many industrialized, fully developed economies across the world rely upon nuclear energy to power their economic growth. India is in the process of constructing ten nuclear power reactors.

One of the major requirements for sustaining human progress is an adequate source of energy. Conservatively, there is enough known reserves of uranium to last 100 years, without additional exploration, any improvements in efficiency, or development of fusion power.

**WIND**  
Top Producing Counties in Oklahoma





(CO2) into the atmosphere. In fact, when one compares the emissions from plants fueled by coal, oil, and natural gas, the levels of carbon dioxide (leading greenhouse gas), sulfur dioxide (precursor to acid rain), and nitrogen oxides (leading component of smog) to those of a nuclear power plant, the latter wins hands down. Nuclear power plants are “emission-free,” adding to our energy diversity while reducing dependency on a single source of electricity.

Only 27% of America’s electricity comes from emission-free sources, which includes nuclear, hydroelectric, wind, and solar. Nuclear energy accounts for almost 75% of the nation’s emission-free electricity generation. For detractor’s that is truly an “inconvenient truth.” The NEI recently released the following to demonstrate that truth.

*“Generating 1 million kilowatt hours of electricity produces: 994 metric tons of CO2 from a coal-fired plant, 814 metric tons from an oil-fired plant, 550 metric tons from a natural gas-fired plant, and NONE from a nuclear plant.”*

And while I’m a staunch supporter of wind power, a wind farm needs close to 250 square miles to produce the same amount of electricity as a 1,000-megawatt nuclear power plant, on one-half of one percent of that area. Fortunately, Western Oklahoma has LOTS of wide open spaces to accommodate both!

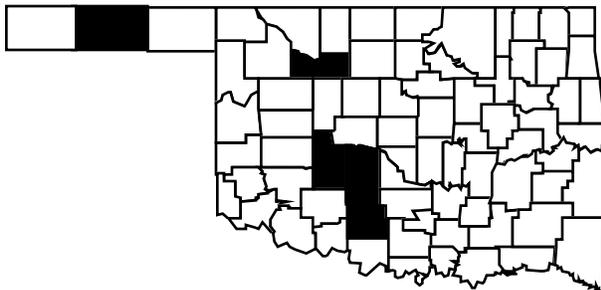
The same can’t be said for either oil or natural gas, given current worldwide consumption patterns.

There are 104 nuclear power plants safely operating in the U.S. today, producing just over 20% of all electricity generated in this country. According to the Nuclear Energy Institute (NEI), that’s over 2,500 combined reactor **YEARS** of experience.

Compared to coal, oil, and natural gas, nuclear energy is relatively “clean.” In fact, one of the major advantages of nuclear energy (as with solar and wind) is that it doesn’t put carbon dioxide

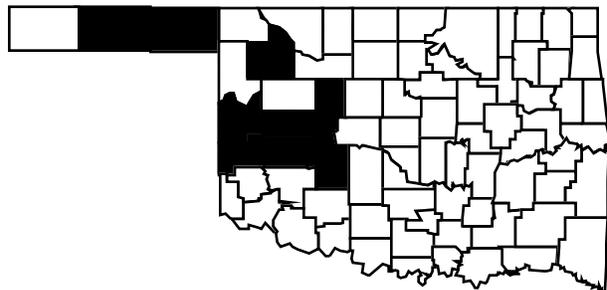
### OIL AND GAS

Top Producing Counties in Oklahoma



### WIND + OIL AND/OR GAS

Top Producing Counties in Oklahoma



There are many, and I once counted myself among them, that would rather see the other emission-free sources assume the dominant role of electrical generation. The Energy Policy Act of 2005 included over \$3 billion in tax credits, along with liability protection, to encourage construction of new plants. Six new sites have recently been approved . . . the closest to Oklahoma being Mississippi. With increased investments in R&D and the advent of new technology, nuclear has a role, side-by-side with other emission-free offerings, in this State's future.



There are over 75 engineering, geologic, and seismic criteria for power plant locations; a cursory review of geologic and seismic patterns in Western Oklahoma make this location far more suitable than other parts of the State for plant location. The issue of where and how to safely store nuclear waste remains, but as we have proven with the reclamation of highly polluted, abandoned well sites, energy extraction/production and environmental harmony can co-exist. With over 440 plants in operation, in 33 countries, there is significant critical mass to resolve all safety and storage issues, regardless of location.

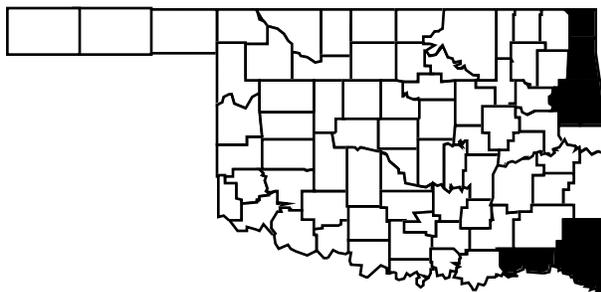
renewable energy cycle end this time? Who knows, but with more consistent and sustained growth from emission-free sources, Western Oklahoma isn't likely to witness the extremes of past business/energy cycles.

So, I see a diversified energy portfolio for Oklahoma that has a combination of Gas, Renewables, Oil, Wind, and Nuclear, with the production/generation and distribution centered in Western Oklahoma. There has been a strong economic revival in many parts of Western Oklahoma, driven by high energy prices and subsequent drilling activities. When will the non-

My metric deals with the share of generation: the minimum contribution from any one source is 5%, the maximum contribution from any one source is 50%, and that nuclear power is a part of that mix by the year 2025. Despite the reduction in permitting and construction delays due to improved regulatory provisions, the planning phase for a new nuclear power plant must begin now for that piece of the metric to be realized. That is a Home G.R.O.W.N. energy future that can truly "unleash prosperity" in this state.

**NO OIL - NO GAS - NO WIND**

Ottawa-Delaware-Cherokee-Adair-McCurtain-Choctaw



Renowned environmentalist James Lovelock once said: "By all means, let us use the small input from renewables sensibly, but only ONE immediately available source does not cause global warming, and that is nuclear energy."

My intent was to focus on "balancing out" the State, from social (reversal of de-population), economic (energy investments and jobs) and environmental perspectives. The world needs energy and Western Oklahoma needs people, but people follow jobs, and jobs require investment capital. And if this can improve the economic and quality of life conditions for over 30 counties in Western Oklahoma, the WHOLE state benefits.

# ***The Oklahoma Creativity Project***

*Sir Ken Robinson, Principal Advisor, The Oklahoma Creativity Project  
Santa Monica, CA*

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## **Introduction**

Like all countries around the world, the United States is being buffeted by turbulent processes of economic and cultural change. In 2007 Oklahoma celebrates its first hundred years of statehood. As it enters its second century, the future success of the state will depend more than ever on cultivating the powers of creativity and innovation of all Oklahomans. To facilitate this process, a wide coalition of organizations and individuals is coming together from across the state to form The Oklahoma Creativity Project (OCP). The aim is to establish Oklahoma in its second century as “The State of Creativity.”

## **The Challenge**

The challenges that face Oklahoma in its second century are economic and they are cultural. In the past, the economy of Oklahoma has flourished through agriculture, manufacturing and the exploitation of natural resources. The state now faces challenges on all fronts: from off shoring and outsourcing in resources, in manufacturing, in customer support and in back office services. In the new economies, the major sources of employment have begun to shift to the service industries, to health care, education and professional occupations. The economic challenge is to establish Oklahoma as a vibrant center for employment by continuously creating new jobs and by attracting major employers in new and traditional businesses.

There are cultural issues too. In recent years, there has been a significant emigration of young people under thirty five from the state, with the largest losses among technical talent. For people of all ages, several factors play a part in choosing where to live and raise families and whether to stay or relocate. They include the quality of education, the safety of neighborhoods, the cost of living and the opportunities for recreation, leisure and self improvement. In these respects, Oklahoma already has many attractions: it has many competitors too.

The cultural challenge is to make Oklahoma an even more attractive place to work, play and raise families through providing the highest quality opportunities in education, leisure and recreation.

## **Goals**

The mission of the Oklahoma Creativity Project is “*to establish Oklahoma as one of the world’s leading centers of creativity and innovation in commerce, culture and education.*” The goals are:

- To enable all Oklahomans to develop their powers of creativity and innovation.
- To generate new jobs and attract new business by supporting the growth of an entrepreneurial economy.
- To support the development of world class cultural and educational opportunities.

## **Strategy**

There are two main elements of the strategy.

### 2008: The Year of Creativity

As an initial focus for project, 2008 is to be designated as “Oklahoma’s Year of Creativity”. This will be presented as a statewide celebration and international showcase of Oklahoma’s creativity, ingenuity and powers of innovation. Oklahoma’s *Year of Creativity* may include festivals, conferences, symposia, trade shows, gala performances, exhibitions, film and television projects and internet initiatives. It will be promoted regionally, nationally and internationally to attract visitors and attention to The State of Creativity.

### Creative Oklahoma

A small, highly focused development agency has been established to support the Oklahoma Creativity Project and to coordinate the Year of Creativity. This agency is called Creative Oklahoma. An initial advisory committee has been formed to support the work of Creative Oklahoma

and of the OCP in general. The membership of the committee will evolve to meet the changing needs of the Project.

### **How will the Project work?**

The OCP is not a single initiative. The aim is to encourage and connect many different programs and initiatives across the state and to work in partnership with existing organizations and communities. Creative Oklahoma will work with other groups to analyze the creative challenges and the opportunities that face Oklahoma. For example, it will develop a strategic innovation map to be used by various stakeholder groups to generate proposals for innovative projects. In addition to education and business, this analysis will focus on Oklahoma's expertise in areas such as weather, energy and healthcare.

*Creative Oklahoma* will help to connect initiatives across the state. It will serve as a clearinghouse for creativity resources, including idea generation techniques, training services in creative thinking and problem solving, mentors, new business coaches and funding sources. It will help to generate new initiatives to support innovation in business, education and the community. These might include developing training programs and research projects and promoting ways of developing new businesses, including creativity incubators.

Capturing the spirit of Oklahomans is central to the OCP and a number of television productions will be broadcast across the state on OETA, the Oklahoma public television network. For example, OETA is producing a series of "Creative Moments" vignettes featuring a diverse group of Oklahomans answering questions such as: What form does my creativity take? Where does my creativity come from? How can I encourage creativity in myself and others? Creative Moments spotlight Oklahoma innovators, business leaders, educators, researchers, students and community citizens.

Other production possibilities include a national documentary series on Oklahoma's creative creativity initiatives. Other marketing and public relations campaigns to promote the Oklahoma Creativity Project will use radio, television and

newspapers and the new media: websites, web-logs ("blogs"), text messages, cell-phones and so on.

### **Partnerships and Resources**

The Oklahoma Creativity Project works through partnerships between educators, corporations, businesses, cultural organizations, philanthropists, celebrity residents, the media, state and local office holders and communities across the state. The collaborating partners already include:

#### *Oklahoma Centennial Commission*

*The Commission completes its work at the end of 2007. The OCP is working with Commission to build on its achievements in 2008.*

#### *OETA – The Oklahoma Network*

*The statewide public television operation is coordinating the production components of the OCP promoting the project across the state.*

#### *Da Vinci Institute*

*This Oklahoma-based think tank is working to promote a statewide creative renaissance. The Institute represents private and public education in the state and a number of other partnerships between business and industry.*

#### *Oklahoma A+ Schools*

*This highly innovative program promotes the creative process in K-12 schools. There are 22 current schools and an additional 10-15 will be added in 2006.*

#### *The Oklahoma Academy for State Goals*

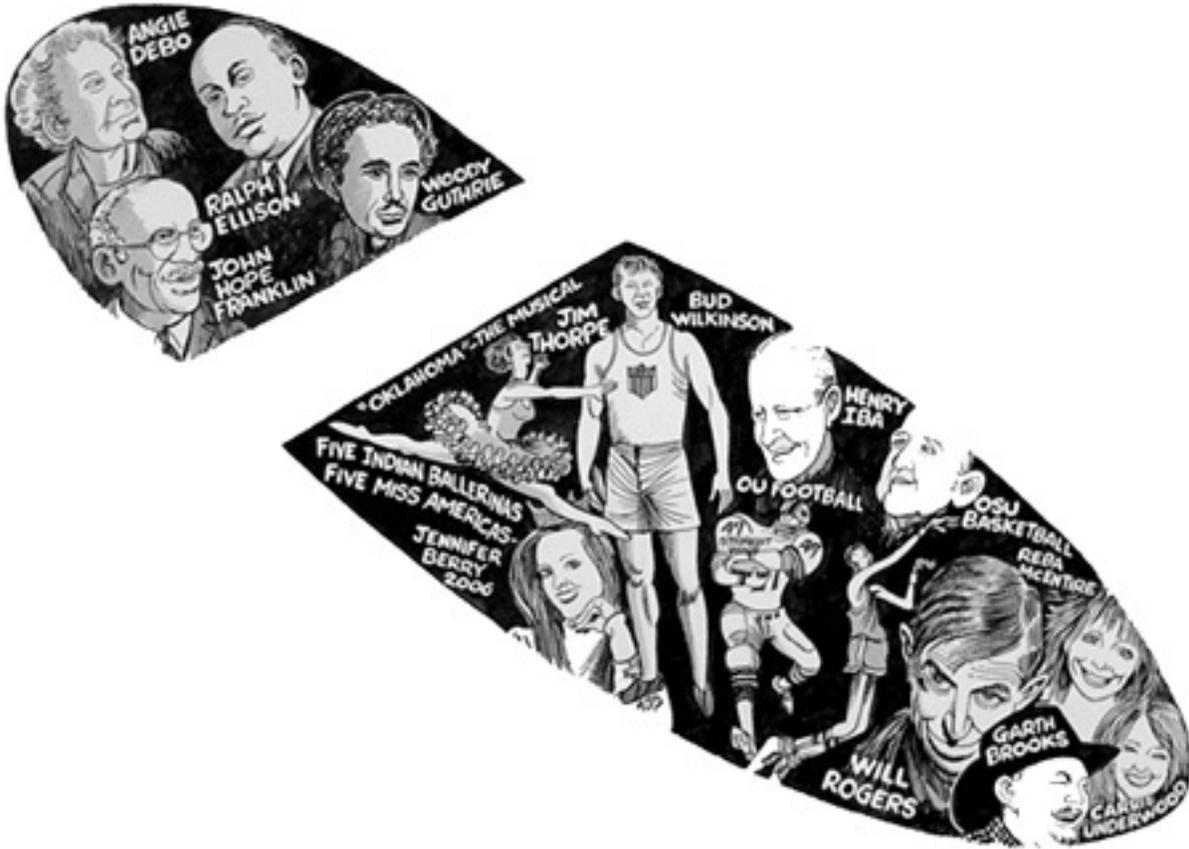
*The Academy will host meetings on the nature and purposes of the OCP and will assist in identifying challenges and opportunities and in engaging other key partners.*

#### *The State of Oklahoma*

*The Oklahoma Creativity Project is already gaining the strong support of state and local officials at all levels of the administration.*

### **Conclusion**

To prosper, Oklahoma must promote new opportunities for creativity and innovation at all levels - in education, government, the work place and in the daily lives of its people and communities. The aim of the Oklahoma Creativity Project is to enable all Oklahomans to add value to their lives for their own well-being and for the economic and cultural prosperity of the state. Oklahomans will celebrate their past achievements in 2007. In 2008, through the Oklahoma Creativity Project, they will anticipate and create their futures.



# *Social Oklahoma^Footsteps*

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*Each author in this section was asked to respond to the following question.*

***“Consider the values and attitudes you see in Oklahoma. What are the challenges Oklahoma faces in meeting the high levels of social development needed for an economy that will capitalize on the growth sectors of the 21st century?”***

*Each author was requested to suggest the one metric that best measures progress in this area – and explain the importance of that metric. The content is the sole responsibility (and choice) of the author as long as it was responsive to the question. The Academy did not dictate content to authors. Nor did the Academy edit content beyond grammar, punctuation and layout. This section contains those responses.*

## *Changes in Oklahoma Demographics*

*Jeff Wallace, Oklahoma Census Data Center  
Oklahoma Department of Commerce, Oklahoma City*

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### *Changes in Population*

#### **Total Population**

Oklahoma has had many major population shifts since statehood. The State population in 1907 was 1,414,000 and has increased 150 percent to 3,547,900 in 2005. The United States grew 240 percent over the same time period – 87,008,000 to 296,410,404.

Beginning with World War I, the state has had major fluctuations in the annual percent change of population. During the Great Depression, the state fell behind the nation in the percent change and was well below the national average until the Baby Boom after World War II. During the Baby Boom there were also major fluctuations in the percent change. Starting in the early 1970s and a new Oil Boom, Oklahoma's percent change in population was well above the national average until the Oil Bust. Since the early 1990s until today, the state percent change in population has mirrored the nation although slightly below the national average.

Only three counties in the state gained population every decade from 1910 to 2000. Not surprisingly, these are the three largest counties in the state: Oklahoma, and Tulsa, and Cleveland. In 1910, Oklahoma County was the largest county in the state but Tulsa County ranked sixth and Cleveland County ranked thirty-eighth. Muskogee County was the second largest county in the state in 1910. Two counties gained population every decade except one. Comanche County gained in all decades except from 1980 to 1990 and Mayes County gained in every decade except 1940 to 1950.

Two counties lost population every decade from 1910 to 2000 - Alfalfa and Grant in far north central Oklahoma. Six other counties lost in every decade except one from 1910 to 2000. All of these counties are in far northwest or far southwest Oklahoma.

Two counties grew more than 1000 percent between 1910 and 2000. Tulsa County grew just over 1500 percent and Cleveland County grew just over 1000 percent. Oklahoma County grew 675 percent between 1910 and 2000. Sixteen counties lost more than half of their population between 1910 and 2000. All of these counties are in the western half of the state except one – Coal County. Twenty more counties lost population between 1910 and 2000, making almost half of Oklahoma counties losing population since just after statehood.

Twenty-one of the counties had their high population of the past 100 years in 2000. Most of these are in the metropolitan areas of the state. The decade with the second highest number of counties having their high population is 1930 with nineteen counties. This is followed closely by 1920 with seventeen counties. In all, forty-six counties (almost 60 percent of all Oklahoma counties) have their high population of the past 100 years in 1930 or prior. In two decades, 1950 and 1990, no counties had their high population mark.

As of July 2005, four counties continue to lead the state in population with over 100,000 persons each: Oklahoma, Tulsa, Cleveland, and Comanche. Four counties in the state have less than 4,000 population: Harper, Roger Mills, Harmon, and Cimarron.

### Population by Race

Oklahoma's racial diversity has changed slightly since statehood. Blacks were the largest minority in the state in every decade from 1910 until 2000. American Indians became the largest minority in 2000 with 7.9 percent of the population compared to 7.6 percent for blacks. Hispanics were not counted in decennial censuses until 1970.

As of the 2000 Census and all race data since, persons may respond to being more than one race. This keeps us from making direct comparisons by race. Race for 2000 shown in the above graphs is for race alone. Race in combination with other races is also available. Hispanic may be of any race. In 2004, the American Indian population continues to be the largest minority in the state at 8.1 percent. This is followed closely by Blacks at 7.7 percent with Hispanics growing quickly to 6.3 percent.

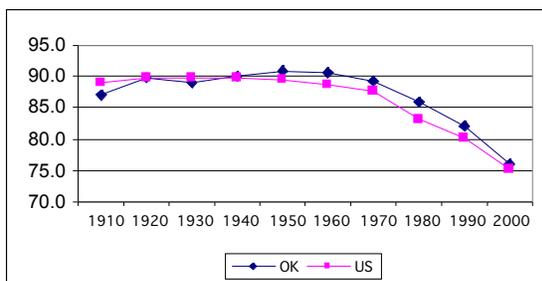
### Population by Age

There have been significant shifts in the population by age groups in Oklahoma since statehood. In 1910, 45.3 percent of the population was under 18 years of age. This percentage has dropped every decade except one until 2000 when the percentage of those less than 18 years was 25.9 percent.

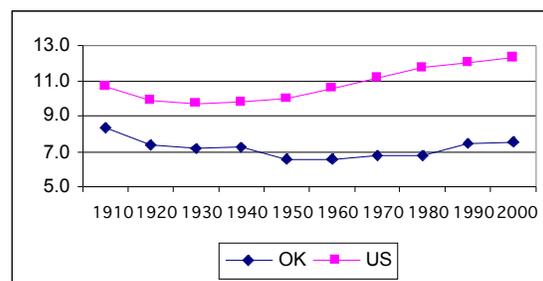
The only decade that the percent of persons under 18 years did not drop was the 1950s. The slight increase between 1950 and 1960 may be attributed to the large number of children born during the Baby Boom.

The 0 to 17 age group continues to drop as a percentage of the total population. As of 2004, this age group in Oklahoma has dropped to 24.4 percent from 25.9 in 2000. The 65 years and over age group has held steady at 13.2 percent of the total population in 2004 as well as 2000. The

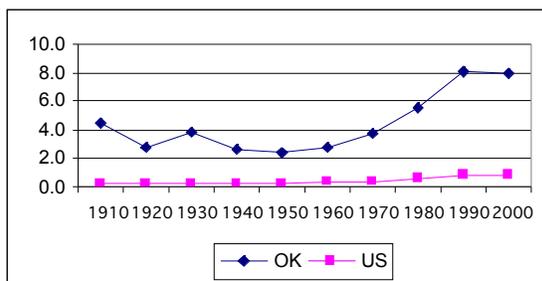
WHITE



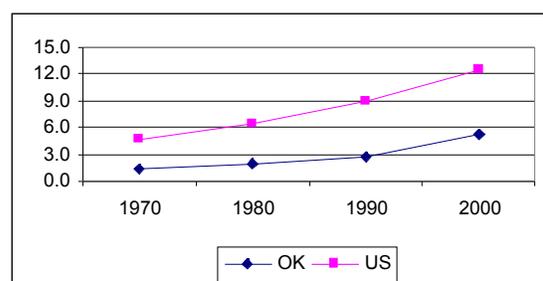
BLACK



INDIAN



HISPANIC



percentage will likely go up dramatically as soon as the Baby Boom generation passes through.

### **Outlook**

Long term population projections can be extremely risky due to the nature of change in our society. Events such as a natural disaster (dust bowl, earthquake, hurricane) can greatly affect population growth for an area even as large as an entire state. Oklahoma is an excellent example. After statehood in 1907 Oklahoma was showing tremendous growth until the Dust Bowl and Great Depression. Another event, positive or negative, can greatly change the population of the State.

Looking at population projections produced in 2002, Oklahoma is expected to pass the 4 million population mark by 2025. Looking even longer term, the State may expect to pass the 5 million mark by 2070 and have 6 million by our bicentennial in 2107.

How will this growth affect our society? We can expect our population to continue to age. We will need the services in place to meet the needs of our aging population. More assisted living facilities, occupations for seniors, and resources for the larger number of retirees are all issues that are and will need to be evaluated.

## ***Changes in Family Structure***

### **Families**

Oklahoma's population increase 108.2 percent from 1,657,155 in 1910 to 3,450,654 in 2000. Families within the State grew at an even faster rate of 162.5 percent from 351,167 in 1910 to 921,750 in 2000. There was an increase in families every decade from 1910 to 2000 except one, 1930 to 1940. The Dust Bowl and Great Depression saw almost 60,000 people and close to 7,500 families leave the State between 1930 and 1940.

Between 1960 and 1970 and between 1970 and 1980, families grew faster than the total population. Families grew 11.5 percent and population grew 9.9 percent between 1960 and 1970 and between 1970 and 1980, families grew 22.2 percent while population grew 18.2 percent. This trend reversed between 1980 and 1990 and also 1990 to 2000. Families grew only 3.4 percent and population grew 4.0 percent between 1980 and 1990 and families grew 7.8 percent with population growing 9.7 percent between 1990 and 2000.

Without annual data on families like what is available for population, it is hard to determine trends based on economic swings. Families will either come together in tough times or they may split apart while one wage earner has to move a great distance to find employment. The decennial census does not give us enough data points to see which of these trends may have happened during the economic swings that have occurred throughout state history.

### **Married Couple Families**

Married-couple families were not counted separately until 1940. From 1940 to 2000, married-couple families grew 48.6 percent compared to 65.6 percent of all families over the same time period. The proportion of married-couple families of all families was at a high of 88.9 percent in 1960 and has fallen to 77.9 percent in 2000. The decade of the 1970s had the largest growth at 19.9 percent just above total population growth of 18.2 percent but still slightly lower than total family growth of 22.2 percent.

### **Male Householder, No Wife Present**

Single parent families were first counted by the Census Bureau in 1970. Male householders, with no wife present increased 263.6 percent from 14,180 in 1970 to 51,564 in 2000. All three decade's growth'— 1970 to 1980, 1980 to 1990,

and 1990 to 2000 – grew more than 50 percent each. The proportion of male householders, with no wife present has increased from 2.1 percent in 1970 to 5.6 percent in 2000.

**Female Householder, No Husband Present**

Female householders, with no husband present make up a much higher proportion of total families than male householders, with no wife present.

There are three times as many female householders, no husband in 2000 (152,575, 16.6 percent) than male householders, no wife (51,564, 5.6 percent). This is an increase of 128.5 percent from 1970. The proportion also increased from 9.9 percent of all families in 1970.

**Group Quarters**

Group quarters population were first collected in 1940. Group quarters are split into two types; institution and non-institutional. Institutional group quarters are those persons under supervised care such as prisons, jails, and nursing homes.

Institutionalized group quarters population went from 21,374 in 1940 to 66,746 in 2000 for a 212.3 percent increase. Non-institutional group quarters include college dorms, military quarters, and transitional shelters. Non-institutionalized group quarters population went from 26,210 in 1940 to 45,629 in 2000 for a 74.1 percent increase.

**Outlook**

The Census Bureau's American Community Survey for 2004 shows the continuing trend of married-couple families falling as a percentage of all families. Both male and female headed households with no spouse present continue to rise as a percentage of all families. The State of Oklahoma has tried to keep this trend from continuing by starting a marriage initiative. Without this and other programs the traditional married-couple family will fall even farther as a percentage of all families.

## ***Our State of Health in Oklahoma***

*Michael Crutcher, MD, Commissioner of Health, State of Oklahoma  
Oklahoma City*

Much attention has been paid over the last several years to the fact that Oklahomans are not as healthy as the people in most other states. What exactly does that mean and, more importantly, what can we do to make our population healthier?

There are several common methods to measure the health of different populations and I will briefly discuss a few of them here to help put in perspective how we compare to other states. Longevity, or average age at death for a population, is a method that is often used and is easy to understand how it applies—people who experience good health and live in safe environments will live longer than those that don't.

Life expectancy varies greatly in the world today depending primarily upon economic development, from a high of 82 years in Japan to lows of around 40 years in some African countries. In the U.S. the average life expectancy is 77.2 years, but in Oklahoma it is only 75.4 years, or almost 2 years less than the national average. Age-adjusted mortality rate (AAMR) measures the number of people that die every year from all causes in a defined population; again, the concept is simple—the fewer people that die every year, the healthier the population.

For the U.S. the AAMR is 868 deaths/100,000 population/year, but in Oklahoma it is 993, which equates to an excess of over 4,200 deaths each year over the national average and ranks us 47<sup>th</sup> nationally, just ahead of Mississippi, Kentucky and West Virginia. The disease process that accounts for the majority of the excess mortality in our state, and for which we now have the unfortunate distinction of ranking 50<sup>th</sup> in the U.S., is heart disease. Other areas in which we exceed the national average in fatalities include stroke, lung cancer, chronic lung disease, automobile crashes and suicide.

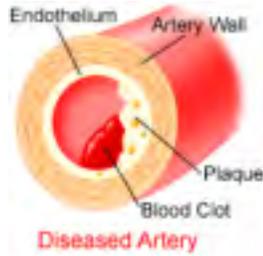
My conclusion from the above data is that significantly more Oklahomans are dying every year, and at an earlier age, from heart disease and other behavior-related chronic diseases than in virtually all other states. Furthermore, I don't believe that we can make significant improvements in the health of our state until we make progress in decreasing the burden of those diseases. How can we do that? Well, first of all let me say that there is no easy fix; improved health in our state will not come by way of some new technological development or increasing the availability of health insurance (although each is important to pursue).



**HEART DISEASE DEATHS IN 2002**  
SOURCE: CDC NATIONAL CENTER FOR HEALTH STATISTICS



**OVERALL MORTALITY RATE IN 2002**  
SOURCE: CDC NATIONAL CENTER FOR HEALTH STATISTICS



**I believe that we will only be able to make significant progress in decreasing our mortality rate (and thereby increasing longevity) by changing the behaviors that contribute to heart disease and other chronic conditions.**

Not surprisingly, when looking at several of the well-established risk factors for heart disease we see that we also rank toward the bottom of the country—tobacco use (#46), regular exercise (#44), and good nutrition as measured by fruit and vegetable consumption (#50).

#### **Weight Control**

Obesity is also a significant problem as 25% of Oklahomans are obese. I see this as our great challenge—creating an environment in our state that encourages and supports healthy behaviors, particularly good nutrition, exercise and not using tobacco products.

#### **Tobacco Use**

There have been some significant successes in these areas recently, especially in the area of tobacco use prevention. Tobacco use contributes to all of our major causes of death (heart disease, stroke, cancer and chronic lung disease) and we are kidding ourselves if we think we can improve the health of our population without efforts to curtail tobacco use. The last couple of years have seen the beginning of similar efforts to improve health by promoting good nutrition and exercise. So, ultimately, I see the challenge before us as finding a way to encourage Oklahomans to “Eat Better, Exercise More, and Be Tobacco Free.”

**The metrics that I would use to monitor progress would be age-adjusted mortality rate and heart disease mortality rate.**

## ***Behavioral Health in Oklahoma***

*Terry Cline, PhD, Secretary of Health State of Oklahoma  
Oklahoma City*

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### **I Think ...**

Improving Oklahoma's health status is an issue to be held at the forefront of public attention.

Whether talking about physical or behavioral health, Oklahoma ranks far below the acceptable curve. National comparisons list the state as forty-fourth in the overall health of our citizenry,<sup>1</sup> and forty-sixth in funding provided to address behavioral health care and prevention needs.<sup>2</sup>

### **Treatment Gap**

While the overall healthcare system is strained and overburdened, it is in the behavioral healthcare fields that an even more profound neglect has occurred. Facing many of the same struggles for funding attention as do programs related to physical health, behavioral health services have endured additional hardships due to their separation from the larger healthcare system and fragmentation of services; the stigma surrounding mental illness and substance abuse; and, limitations and financial requirements placed upon mental health benefits.<sup>3</sup>

Over the course of their lifetime, nearly half of all Americans will experience some type of behavioral disorder. Sixty percent of these individuals will not seek any care and another 33 percent will receive attention meeting only minimally adequate standards.<sup>4</sup>

In Oklahoma, it is estimated that 70 percent of those in need of treatment for a serious mental illness and 77 percent of adults in need of treatment for substance abuse are not receiving appropriate care.<sup>5</sup>

### **The Consequences of Delayed Treatment**

Like many physical health issues, avoiding or delaying appropriate behavioral health treatment allows the disease to worsen. This requires more

invasive and costly treatment options at a later point. Unlike many chronic physical disorders, behavioral illnesses often begin in childhood or adolescence and have a greater delay between onset of the disease and access to services, from 6 to 23 years delay depending on the type of illness.<sup>6</sup>

These unique challenges affecting behavioral disorders further compound the effects of long-term disability and adversely impact quality of life. The resulting consequences go beyond immediate health concerns and begin to impact the individual's ability to effectively function in society. This in turn translates to increased economic stressors such as decreased workplace productivity and depletion of the available workforce, increased costs for services and diversion of funds that would otherwise be available for economic and infrastructure development.

### **Untreated and Under-treated Behavioral Illnesses and Economic Effect**

As mentioned, failure to access appropriate services or delays in treatment are common in behavioral health care. Unfortunately, attention to behavioral illnesses at first onset is imperative to limiting the far reaching debilitating effects of these diseases.

Oklahoma ranks well above the national average in disability adjusted life years (DALY), a measurement that includes years of life lost from premature death and years lived with a disability of known severity. The leading cause of disability in established market economies around the world is neuropsychiatric disorders. It is a primary cause for decreased quality of life and premature death, and if left untreated, has a significantly greater impact on the health and well-being of Oklahomans than any other disease including cardiovascular disease and cancer.

Once considered out of the purview of public health and prevention, mental and addictive disorders now must be considered as significant contributors to population-based disease, disability, and death.

Untreated substance abuse and mental illness costs the state more than \$3.2 billion in direct expenditures each year – costs that are imbedded in the tax system, insurance and health care and numerous other aspects of our economic system. The impact on the workforce alone is staggering. It is estimated that Oklahoma employers will expend over \$600 million annually in additional medical costs for some 200,000 Oklahoma workers abusing alcohol or struggling with the effects of depression. These are cash expenditures that could otherwise be used for education, family services, job development or additional issues of public concern if everyone were able to receive appropriate behavioral health care. When you include indirect cost such as lost worker productivity, the cost estimate to Oklahomans jumps to nearly \$8 billion.<sup>7</sup>

### **Measuring Our Effectiveness**

The presence of mental and addictive disorders - especially if severe, unrecognized, or poorly treated — has far reaching effects. Studies have shown that divorce, unemployment, lower productivity, school drop out, unwanted pregnancies, and incarceration all are potential consequences of inadequately addressed behavioral disorders; and are very expensive to our society in a variety of ways.

Societal impact of these diseases, as opposed to individual treatment access, may be the most important measure of system capabilities and effectiveness.

For instance, the relationship between behavioral health issues and incarceration rates are a particularly valid barometer for our success in getting services to those in need. Too many people are incarcerated each year because they are unable to access treatment for mental illnesses or substance abuse problems. Once they are

incarcerated, many are unable to access appropriate treatment, or when released from jail have no place to stay, only a few days' supply of medication and limited access to treatment.

Appropriate care is a means to prevent crime, reduce unnecessary and expensive incarceration and lower the recidivism rate for offenders. This has been proven through partnership with the criminal justice system and programs such as mental health and drug courts.

Measurement of our incarceration rate for persons diagnosed with mental illness, or experiencing substance abuse problems, with estimates as high as 80% of the overall incarcerated population, may prove to be a more accurate assessment of our performance. The measurement is a direct reflection on the successes and failures of multiple systems to treat and care for a vulnerable population. Such a measurement also allows for comparisons to other states. With the highest incarceration rate per capita for women in the nation, and ranking consistently in the top five for men, it is clear there is much work to do.

### **System Reform and Transformation**

By collaborating with a broad spectrum of leaders from multiple state agencies, advocacy organizations, consumers and family members, providers, and legislators, the way has been paved for meaningful transformation of our state's behavioral health system. A renewed focus on the overall health and wellness of the consumer, and the reliance on collaborative efforts and cross-agency initiatives, are already impacting how the state views mental health and substance abuse services.

Oklahoma's vision is that everyone with a mental illness or experiencing substance abuse, at any stage of life, has access to effective treatment and supports in order to recover from these diseases.

Reaching that point will require changes in both system structure and policy, as well as the commitment of resources to this crucial goal. We

must continue to rely upon and expand the use of evidence-based practices, take advantage of available information technology, align payment policies with quality improvement and prepare our workforce to be capable of meeting the challenges before us.

### Conclusion

Science has greatly expanded our understanding and treatment of addictions and severe mental illnesses. Once warehoused and forgotten in isolated mental institutions, or locked away for years, individuals with brain disorders have a real chance at reclaiming full, productive lives, but only if they have access to the treatments, services, and programs so vital to recovery.

As noted by U.S. Surgeon General Dr. David Satcher,<sup>8</sup> the public stigma associated with these illnesses – despite the countless number of individuals who are proof that treatment works – is a primary barrier to realizing the level of success to which we aspire.

Once thought untreatable, recovery is now the norm for those who access proper care. Tragically, fear and misunderstanding keep people from seeking care, limit public support for expanded services and make it difficult for individuals to rebuild their lives once they are well.

Access to appropriate services and medication, and the implementation of early intervention programs at the community level, are keys to lessening the societal impact of substance abuse and mental illness, and initiating individuals to a path of recovery.

We are capable of creating a health care delivery system sufficient to meet and exceed expectations. It is, however, dependent on the involvement of all system stakeholders in development of a consensus opinion that our state's economic future is directly tied to the health of our citizens. Achieving this will demand that public policy and resources respond accordingly.



### NOTES

<sup>1</sup> United Health Foundation, America's Health Rankings, p. 68, 2005 Edition

<sup>2</sup> National Alliance for the Mentally Ill, Grading the States 2006, A Report on America's Health Care System for Serious Mental Illness

<sup>3</sup> President's New Freedom Commission on Mental Health, 2003

<sup>4</sup> Ronald C. Kessler, PhD; Patricia Berglund, MBA; Olga Demler, MA, MS; Robert Jin, MA; Kathleen R. Merikangas, PhD; Ellen E. Walters, MS; Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry, June 2005; 62:593-602.

<sup>5</sup> ODMHSAS Decision Support Services, Treatment Gap Among Oklahomans in Need of Mental Health and Substance Abuse Treatment (FY 2005)

<sup>6</sup> Philip S. Wang, MD, DrPH; Patricia Berglund, MBA; Mark Olfson, MD, MPH; Harold A. Pincus, MD; Kenneth B. Wells, MD, MPH; Ronald C. Kessler, PhD; Failure and Delay in Initial Treatment Contact After First Onset of Mental Disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry, June 2005; 62:603-613

<sup>7</sup> State of Oklahoma, Governor's and Attorney General's Blue Ribbon Task Force on Mental Health, Substance Abuse and Domestic Violence, 2004

<sup>8</sup> United States Department of Health and Human Services, The Surgeon General's Report on Mental Health, 1999

## ***Our State of Spiritual Health in Oklahoma***

*The Reverend Stephen L. McKee, Rector and The Reverend Joseph C. Alsay, Curate  
Trinity Episcopal Church, Tulsa*

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One noted Christian scholar has suggested that spirituality is paying attention to our relationship with God. Practices such as reading the Bible or other Sacred Writings, praying at specific times of the day, silent retreats, fasting, meditation, special disciplines are all part of many different faith traditions. The ultimate goal of each is to strengthen a relationship with God - or improving our spiritual health.

Our religious background is rooted in the Judeo-Christian heritage. So when we think of spiritual health we link to our Judeo-Christian heritage. It is through these lenses that we see. Those religions that have links and ties with the Abrahamic lineage—Jews, Christians, and Muslims—would agree that key to our understanding of social ethics are the words of the prophets in the Hebrew Scriptures.

The prophets constantly called for justice and spoke on behalf of the “people” We see time and time again that the prophets called to remembrance the will of God as it related to the idle rich and their oppression of the poor. For the prophets, the oppressors of their day included the Church.

**The prophets denounced the trinity of evildoers: idle rich, corrupt politicians, and false prophets with unworthy priests. Among the three groups they counted false prophet religious leaders the worst. In some quarters, we think this may continue today!**

Living on the bounty of the rich, basking in the favor of political rulers, such prophets found it easy to justify the wicked for a reward. They knew how to curry favor with men in high places, and how to bolster up an unspeakable cause by pronouncing on it the blessing of God.

The prophets cried out against this prostitution of men’s powers. They pronounced the judgment of God on the trinity of evildoers who conspired to defraud the poor. From that day until now holy men and women such as Micah the prophet, have pleaded for the rights of the common people. Often their messages have related to distribution of the land. With political questions as such, spokesmen for God have no right to interfere. But when laws and customs make it hard for a working person to support their family in comfort, the prophet of God dare not sit dumb and idle.

The clarion ring of “Christian family values” is heard from every Oklahoma bell tower. True Christian values - and thus spirituality - are biblically inspired, based on our understanding of the life of Jesus of Nazareth. Jesus spent his time with the marginalized of his society. He talked mostly about how people used their money. Jesus often echoed the prophets of the Old Testament who called their society to take care of the “widowed and orphaned”, to care for the marginalized of their society.

The sad truth is that zealots and ideologues are willing to do/ say anything to obtain power and /or enrich themselves at the expense of those they falsely claim to represent. Many times they set into motion an agenda to dupe their flocks into believing that those of the minority (Gays, Hispanics, African Americans, etc) deserve to be ostracized, humiliated, and discriminated against for the betterment of the country and in the name of Christ. This appalling! How many more lies and fabrications will be foisted upon us in the name of Jesus?

We may have the inalienable right to disagree with anyone’s lifestyle, however, none of us has a right to impose our so-called values on our brothers and sisters no matter how righteous we believe

ourselves to be. We must always remember Jesus calls for justice. His mission was mainly about love and inclusion. It is in the expressions of love and inclusion of all God's people that pure "religious" practice is found.

**With this understanding, what is the state of "spiritual health" in Oklahoma? We asked an informed friend. She said a "C-minus". That may be right.**

We appear to be too intolerant and too inflexible. Incidents of discrimination against our Hispanic community are rising, not to mention the cloaked stigma that still remains attached to the Tulsa's Race Riots. There is a sense that we lack the ability to be a welcoming and hospitable state for those who are different than we perceive ourselves. This lack of hospitality may be due to our "rugged individualism" which was born out of the frontier spirit that gave birth to our state. Whatever the case, Oklahoma faces the real prospect of not attracting the best and brightest or retaining those who are already in our midst due to the fact that our younger generations value inclusiveness.

We find it amazing that a state that hails itself as being so thoroughly religious has such a high rate of out of wedlock births. We ask "where is the local religious leadership? Where is the clergy holding the moral compass? Why is this happening?"

Facts show that around 50 percent of all first marriages end in divorce, and over 60 percent of all divorces involve children. One-third of all births are out of wedlock, nearly 40 percent of children do not live with their biological fathers, and too many non-resident fathers neither support nor see their children on a regular basis.

In fact, children living with single mothers are five times more likely to be poor than those in two parent families.

The fact or thought of raising a child in near poverty is too much for some mothers to bear. For the mother who many times is no more than a child

herself the idea of feeding one more mouth is an impossibility. For too many of these young women they believe the only plausible solution is an abortion.

Successful marriages are more difficult when husbands and wives are poorly educated, lack access to jobs that pay decently, and cannot afford decent child care. Economic hardship and other problems associated with poverty can wreak havoc on couples' relationships. Marrying a low-income, unmarried mother to her child's father will not magically raise the family out of poverty when the parents often have no skills, no jobs, terrible housing, and may be struggling with depression, substance abuse, or domestic violence.

It would seem to make sense that if liberals and conservatives are serious about strengthening families for the sake of helping children, three things need to happen. (1) "liberals" need to be less sanctimonious and non-judgemental and promote the sanctity, responsibilities and value of marriage (2) "conservatives" need to better appreciate the economic pressures involved on younger people and (3) the Church needs to be much more forceful in a positive "tough-love" way.

The religious community could decide to light a candle instead of cursing the darkness by implementing programs such as Trinity's Iron Gate ministry which feeds the homeless and hungry of the greater Tulsa community or the Trinity sponsored Camp New Hope that helps the children of incarcerated parents.

Public officials could talk less about morality and take more action in caring for others and directing public spending on needy children, the homeless, the elderly, drug-treatment, and education. When politicians and preachers try to clothe themselves in messages that are divisive, polarizing and demeaning, they offset the good works of others.

We think it impossible to create a metric spiritual health. But I think we will all know better spiritual health when and where we see it.

## ***Strategies for Our Second Century***

*Paul G. Risser, Chancellor of Higher Education, State of Oklahoma*

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### **Identifying the challenges**

Challenges Oklahoma faces in meeting the high levels of educational attainment needed for an economy that will capitalize on the growth sectors of the 21<sup>st</sup> century:

- 1. Too few students graduate from Oklahoma high schools prepared to be successful in college or the world of work**
- 2. Too few Oklahomans have a college degree and the current college-going rate of high school seniors will not enable Oklahoma to catch up with other states**
- 3. Too few college graduates are hired and retained by Oklahoma businesses**
- 4. Too few dollars are invested in research that can be commercialized to expand current businesses or create new businesses with high paying jobs in Oklahoma**
- 5. Too few dollars are invested in Oklahoma's public colleges and our college students**

Unless these challenges are met, it is unlikely that Oklahoma will create a strong economy in the growth sectors of the 21<sup>st</sup> Century, Oklahomans will continue to be relegated to a relatively low *per capita* income, and as a result, too many Oklahomans will be limited in their ability to experience life to the fullest. However, as described below, Oklahoma can take specific feasible steps that will strengthen higher education and ultimately increase the standard of living in Oklahoma.

Oklahoma is not alone in recognizing the imperative to meet these challenges. *As Americans, we should welcome a global society and economy in which nations and states and communities*

*compete to develop human talent, primarily by educating more people and educating them better* (James B. Hunt, Educational Leadership for the 21<sup>st</sup> Century).<sup>2</sup> *Indeed, the stakes could hardly be higher for the states and the nations in this competition. At issue is whose standard of living will rise and whose will fall in a global economic environment that demands ever larger numbers of highly trained and educated workers* (Thomas J. Tierney, How is American Higher Education Measuring Up? An Outsider's Perspective).<sup>2</sup> This is the challenge for all Oklahomans—we must be successful in a world that has changed.

The most descriptive and valuable metric for measuring educational and skills development progress in our state is the percentage of Oklahomans with a bachelor's degree or higher. This measure is significant because an increase in the share of Oklahomans with a bachelor's degree or higher is associated with a measurable increase in real personal income.<sup>8</sup>

**However, for the purpose of this discussion paper, I am offering a more refined metric: the number of college graduates in the STEM (science, technology, engineering and mathematics) disciplines who remain in Oklahoma's workforce five years after graduating from our public colleges and universities.**

Today's economy is driven by technology and innovation in both goods and services. Put another way, as Richard Florida explains in *The Rise of the Creative Class*, the elements of success in today's world are technology, talent and tolerance.

And yet, too few of our high school graduating students are prepared to be successful in college in these STEM disciplines, Oklahoma does not produce enough college graduates in these areas,

too few of these college graduates go on to advanced degrees, and too many of our college graduates in these technological areas must eventually go out of state to find well-paying and progressive jobs.

### **Too few students graduating from Oklahoma high schools are prepared to be successful in college ...**

ACT<sup>1</sup> has calculated the percentage of Oklahoma high school seniors who are prepared to be successful in college (50% chance of achieving a grade of B or better; 75% of earning a grade of C or better in the beginning college class):

- 68% of Oklahoma high school seniors are ready to be successful in college English
- 32% of Oklahoma high school seniors are ready to be successful in college Algebra
- 24% of Oklahoma high school seniors are ready to be successful in college Biology



The just released 2005 Nation's Report Card on science measures progress in grades 4, 8 and 12 in students' knowledge of earth, physical and life sciences. In Oklahoma, 43 percent of our eighth-graders scored below basic achievement, 32 percent scored at the basic level, 23 percent scored proficient and 2 percent scored advanced (12<sup>th</sup> grade students were not summarized by state). Male students had an average score five points higher than that of female students. Black students scored on average of 35 points lower than white students. Hispanic students had an average score 24 points lower than white students.

As this discussion paper is being written, the Texas Legislature has just passed a bill that the Governor is expected to sign, increasing the college-going high school curriculum to include four years of mathematics and four years of science. Oklahoma's new Achieving Classroom Excellence (ACE) high school graduation curriculum will require three years of math and three years of laboratory science.

### **Proposed Actions**

- Align as identical the curricula for high school graduation, Oklahoma Higher Learning Access Program (OHLAP) eligibility, college entrance and the basis for evaluating middle and high school teacher performance. Data demonstrate conclusively that high school students substantially increase the probability of graduating from college by enrolling in a college-preparation curriculum, including one mathematics course beyond Algebra II.
- Institute a focused statewide effort to increase the effectiveness of teaching middle school, high school and college science (see the BIO 2010 recommendations from the National Academy of Sciences) and mathematics (see the evolving "common ground" mathematics curriculum. 9) courses, particularly in assisting minority students to be successful.

**Too few Oklahomans have a college degree and the current college-going rate of high school seniors will not enable Oklahoma to catch up with other states with whom we compete economically ...**

Only about 23% of Oklahoma citizens have a bachelor’s degree or higher, but the national average is greater than 26%. Approximately 94% of Oklahoma high school students say they expect to attend college right after high school, but only 56.3% do so. <sup>4</sup> Although financial burdens are frequently given as reasons high school students do not enroll in college, survey data taken through the Oklahoma GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) indicate that three other reasons are probably just as important: students do not see the advantage of a college degree, students do not believe they are prepared for college, and parents and counselors do not encourage college enrollment. Most of the future increase in numbers of college students in Oklahoma will come from low-income or minority ethnic groups who are now under-represented in the college-going population and from non-traditional adult students.

We are making progress. The number of college-going students in Oklahoma (headcount enrollment) has increased from about 209,000 in 2000 to 235,000 in 2004. And, as depicted below, college graduation rates are increasing at Oklahoma’s public colleges and universities.

**Graduation Rates (6-year)**

	<u>2000</u>	<u>2003</u>
Research Universities	54.7%	60.2%
Regional Universities	35.7%	38.3%
Community Colleges	28.5%	32.8%

**Proposed Actions**

- Continue implementation and promotion of the Oklahoma higher education adult degree program, scheduled to begin in January 2007. Among college-going students between the

ages of 25 and 49-years old, 3.1% of the Oklahoma population is going to college compared to 2.7% among other states; <sup>4</sup> however, more than 60,000 Oklahomans have started but not completed a bachelor’s degree.

- Encourage all eligible students to participate in OHLAP because students in OHLAP are more likely to go to college and graduate. <sup>4</sup>
- Foster GEAR UP programs through community-based organizations to assist students prepare for and enroll in college.

**Too few college graduates are hired by Oklahoma businesses ...**

In a study released May 10, 2006, ACT found that the reading and mathematics skills needed for success in the workplace are essentially the same as (statistically comparable to) those needed for success in the first year of college. This analysis was based on an assessment called WorkKeys (increasingly used in Oklahoma) that assesses a person’s ability to qualify for a range of occupations (for example, construction worker or electrician) that pay enough to support a family of four. Thus, the old distinction of preparing students to be college-ready or work-ready is largely specious—the same curriculum should be designed so they can be college-ready and work-ready.

Students who graduate from Oklahoma’s public universities and colleges are very likely to be employed in the state’s workforce the year after they graduate. <sup>4</sup> This percentage averages about 80% one year after graduation with a bachelor’s degree, but varies among types of colleges and universities and among disciplines. Graduates in high-technology disciplines are more likely to leave the state, as are graduates from the two research universities. Among those out-of-state students who graduate from our public colleges and universities, 48% stay in Oklahoma and take a job immediately after college.



Thus, graduates from our colleges and universities prefer to work in Oklahoma. However, this rate drops significantly (81% to 58%) after five years. Oklahoma has a smaller proportion of high technology jobs as compared to other states and our employers are less likely to seek college graduates as employees.<sup>5</sup>

Ironically, when new employers arrive in Oklahoma seeking college-educated employees, these businesses sometimes find it difficult to connect with these prospective employees. This connection will become stronger as the college and university career services work more closely with the Oklahoma Employment Security Commission (OESC), industry employers and economic development organizations.

Based on a 2005 survey of Oklahoma employers<sup>5</sup>, more than 75% of Oklahoma businesses stated that they do not require employee education beyond the high school level. However, according to the 2004 Oklahoma Social Indicators Survey (Oklahoma State University), 85% of Oklahomans believe that some postsecondary education is necessary to be successful in the state's economy. Thus, there is a significant difference between our employers' expectations for their employees and the public perception of what is required for employees (and employers) to be successful.

### **Proposed Actions**

- Increase the connections between the college and university career services/alumni offices with employment offices of extant and prospective businesses in Oklahoma. Colleges and universities need to actively promote their graduates to Oklahoma employers.
- Oklahoma employers need to hire college graduates as employees whenever possible to increase the productivity and competitiveness of our business sector. International statistics demonstrate that increasing the college learning of the workforce increases business and industry productivity.<sup>6</sup>

### **Too few dollars are invested in research that can be commercialized to expand current businesses or create new businesses with high paying jobs in Oklahoma ...**

Although estimates range from 50% to 80%, much of the nation's economic growth today is generated by new technologies and new ways of doing business. These new goods and services inventions result from the application of research.

The importance of research was recognized in the Economic Development Generating Excellence (EDGE) process in which thousands of Oklahomans participated in recommending a set of actions that would increase our state's economy.<sup>7</sup>

The first EDGE recommendation was to establish a \$1.0 billion research endowment to fund key actions that will allow Oklahoma to become a center of powerful research that will support a vigorous economy.

### **Proposed Actions**

- Fund the proposed \$1.0 billion EDGE research endowment and use the earnings to support research that will lead to discoveries that can be commercialized into goods and services.

These investments should be targeted in research projects that are likely to increase the strength of existing businesses and to create new businesses in Oklahoma.

- Leverage public investments in research with private dollars to build an innovative business climate from collaboration among the private sector, academic institutions and state government. These collaborations should seek to increase the number of federal research dollars that are attracted to Oklahoma.

### **Too few dollars are invested in Oklahoma's colleges and college students ...**

Funding for public college students in Oklahoma is very far below comparable funding in other states, in fact, \$1,212 less per student (FTE) than the average of other states (SHEEO national data). This means for every full-time student, our public colleges and universities are educating students with \$1,212 fewer dollars than the average among comparable institutions in our competitor states. This calculation takes into consideration that Oklahoma has a lower cost of living, but a higher relative mix of more expensive programs offered at our colleges and universities.

Oklahoma's businesses, and therefore their employees, are the ultimate victims of this low state support of higher education funding. Although this connection is subtle, it is powerful. For our businesses to compete successfully in today's information-based, technology-driven global economy, they must use the latest techniques, the most advanced equipment, the newest ideas, and work in a complex and international market. Among the best sources of all these essential ingredients are college graduates who join Oklahoma businesses as new employees or as continuing employees after completing a college degree. If our colleges and universities do not have the funding to give students international experiences, to purchase the latest equipment on which students can learn, to have access to the most complete data sets and newest analytical

techniques, or hire and retain the highest-quality faculty, our students cannot bring this best expertise to Oklahoma businesses—remember, each year, more than 80% of the 28,000 graduates take jobs in Oklahoma within one year of graduating from our public colleges and universities.

### **Proposed Actions**

- Increase funding (state appropriations + tuition) at Oklahoma's public colleges and universities on a per student basis to the average rate of other states. In FY07, this means increasing funding for each full-time student by \$1,212.

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## ***College Attendance Patterns of Oklahoma Rural Students***

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Emerging evidence indicates that many of Oklahoma's students from isolated rural schools, even though they are as academically qualified as other students in the state, are not taking advantage of the higher educational opportunities presently available to them. While there has been a movement of Oklahoma's population to the I-44 corridor over the course of the past 30 years, educationally, Oklahoma is still very much a rural state. Almost 32% of Oklahoma's public school students attend a rural school. Of the 460 secondary schools in Oklahoma, 322, or 70%, are located in rural communities. The success of Oklahoma will be dependent on the success of rural Oklahoma students (Oklahoma State Department of Education).

Almost 58% of Oklahoma's rural students live in poverty (Johnson & Strange). According to the US Census Bureau (2005), the median household income for the state of Oklahoma for 2003-04 was \$38,274, compared to just \$16,256 for families living in Oklahoma's rural communities (ibid.). Further, the poverty of these communities is reflected in the funding of rural schools. According to the Rural Trust, there is a general fund revenue difference between rural schools and other schools in the state of \$1,822 (ibid.). Rural schools often operate in inadequate facilities, struggle to meet state-mandated course offering requirements (especially in the critical areas of math, science, and foreign language), face difficulties attracting and retaining qualified teachers, and deal with high transportation costs and low levels of parental educational attainment (Abbott, Bauman & Graf, Johnson & Strange). Considering these problems, rural schools will require a coordinated effort if they are to increase the number of their students attending and succeeding in higher education.

An analysis of Oklahoma secondary school's district report card data from the 2003-2004 school year was performed using the U.S. Census Bureau's eight Location Codes. Under this classification, each community in the United States is assigned a number from 1 (Large Urban, over 250,000 in population) to 7 (Rural, inside a Standard Metropolitan Statistical Area (SMSA)) and 8 (Rural). Comparisons were first made to discover differences among these groups in ACT scores, completion of the ACT recommended college-preparatory curriculum, college attendance rates, college academic performance, and college completion rates. A second analysis was undertaken comparing category 7 and 8 schools (the rural classifications) with all other schools within the state. Data analysis included simple means comparison, independent samples t-tests, and analyses of variance.

Oklahoma's secondary schools are classified by the U.S Census Bureau as shown in the table below.

<b>Cat</b>	<b>Location</b>	<b>No.</b>
1	Large urban, over 250,000	29
2	Mid-sized cities under 250,000	3
3	Urban fringe	45
4	Urban Fringe of SMSA (Ft. Smith AR)	4
5	Large town, 25,000 or More	7
6	Small town, less than 25,000	50
7	Rural inside a SMSA	241
8	Rural	81

The results of the simple comparison of means produced some interesting results. This low level of data analysis revealed poor performance of the students from the Large Urban category in the areas of college grade point, college completion,

ACT Mean Score, and ACT participation, with these students ranking 7<sup>th</sup> or 8<sup>th</sup> out of 8 in all areas. These students attended college at the second highest level, second only to the suburban category (Urban Fringe). The high attendance rate of the state's urban students may be accounted for by the availability of open-enrollment institution spaces.

There are a total of 19 institutions of higher education located in urban Oklahoma, and 22 in rural Oklahoma. These numbers, however, are misleading. When student enrollments are examined, it becomes apparent that there are many more educational opportunities available to urban Oklahoma students than their rural counterparts. Of the 191,593 students enrolled in institutions of higher education in Oklahoma, 112,051, or almost 70 percent, are enrolled in institutions located in urban or suburban settings (Carnegie Foundation). Of the two-year college enrollments in the state, over 45,000 students are enrolled in urban or suburban open admissions institutions, compared to only 15,837 in similar rural institutions (Ibid.).

These numbers may partially explain why many urban students attend institutions of higher education but do not complete. Based on the average ACT score for urban students, it appears that while they may not be adequately prepared for college, they attend in disproportionate numbers, simply due to the relatively greater opportunities for college attendance, compared to those for rural students.

It is also interesting to note the relatively competitive scores of the rural schools (category 7&8) in the areas of Freshman GPA (3<sup>rd</sup> and 4<sup>th</sup> place), College Completion Rate (4<sup>th</sup> and 6<sup>th</sup> place), ACT Mean Score (3<sup>rd</sup> and 4<sup>th</sup> place) and ACT Participation (2<sup>nd</sup> and 5<sup>th</sup> place). These measures place these schools near the middle of the pack, when compared to the schools in the other categories.

A further analysis was performed of the comparisons initial means comparisons. It was discovered that students from schools in the rural

categories were attending college at a rate much lower than the students from the other six categories. In order to draw any real meaning from this data, the two rural categories were combined and compared to the combined other six categories.

When the data were examined using an analysis of variance, it showed that there were no significant differences for the mean measures of all categories except one: Oklahoma college-going rate of rural students compared to the Oklahoma college-going rate for non-rural students.

The seven counties in Oklahoma with the lowest annual income are also the counties with the lowest level of educational attainment. These counties, Adair, Harmon, Haskell, McCurtain, Okfuskee, Pushmataha, and Tillman, account for 172 school districts, with 31 secondary schools, and over 27,000 of Oklahoma's public school students (U. S. Census Bureau, National Center for Education Statistics). When the factors analyzed for this study were compared to these schools to the others in the state, again, college-going rate was the only difference that was statistically significant. Students in these counties were attending at a rate 8.9 % lower rate than others.

It appears that the impacts of poverty, low educational attainment of the community, and relative isolation from higher educational resources may be negatively impacting the college attendance rates of Oklahoma's rural students. While the ACE Initiatives, Oklahoma EDGE, OHLAP and Gear Up, are valuable first steps, colleges and universities within the state must institute cooperative programs that work with rural schools to insure the transition of their student to higher education.

Through educational outreach programs, colleges, universities, and rural schools should form educational cooperatives that bring college and university faculty and administrators together with their counterparts in rural schools. Such programs would seek to overcome those social, cultural, and

economic barriers that are inhibiting our rural students from attending college. Example strategies would include coordinated OHLAP and Gear Up programs, and quarterly parent “college night” programs, beginning for parents of 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students. These programs would focus on both teaching parents what they need to know to help their children prepare and plan for college and on increasing students’ college aspirations. Coordination between school counseling and college admissions staff could facilitate these programs.

Assessments of students’ skills and interests could be performed as early as the middle school years and matched with potential college majors, providing students with tangible information with which to set their goals. Information regarding potential college majors, scholarships, other forms of financial aid, and college admissions issues could be communicated to students and parents based in these assessments.

Videoconferencing technology could be employed to provide virtual campus tours and faculty presentations regarding career and college majors. Students could be exposed to teachers and researchers from across the academic disciplines and have the opportunity to ask questions and see first hand what various professionals do in real life.

College faculty and secondary teachers could work cooperatively by means of videoconferencing, email, chat, online bulletin boards, and online courses to improve instructional methods and expand educational resources for college-bound students. In short, programs could be established to break down the institutional walls that separate rural schools and institutions of higher education within this state through implementation and training in the use of technology in order to coordinate and leverage existing resources.

The K20 Center for Educational and Community Renewal has now trained over 900 school administrators and implemented technology and

professional development grants to 62 schools in the state of Oklahoma. The K20 Center addresses the needs of children and families through interactive, action-oriented partnerships that bring together schools, families, universities, and community and government agencies.

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## Oklahoma's Public K-12 System

Sandy Garrett, State Superintendent of Public Instruction  
Oklahoma City

Oklahoma is on the move! And, because a better educated workforce will bring both economic prosperity and a higher quality of life to our citizens, education must remain top priority for all Oklahomans as we prepare for our next century.

As state superintendent, I believe we must design education services with global competition in mind. The world's playing field has been leveled according to Pulitzer Prize-winning author Thomas Friedman's 2005 book *The World is Flat*. His "ten forces that flattened the world" were mainly political events and technological innovations that began in 1989 with the fall of the Berlin Wall and include the day in 1995 when Netscape went public. Now, Oklahoma's political and technological innovations must be focused with intensity on meeting today's challenges and tomorrow's actions.

### Today's Challenges:

So much has changed in Oklahoma's first century that we can only project, predict and plan for future prosperity based on what we know today. We know that, every day, Oklahoma schools address the challenges of changing demographics and increasing diversity in the student population,

which in 2005-06 had the largest enrollment in state history. Of more than 634,000 students:

- 341,588 qualified for free or reduced-price meals at school (the federal indicator of poverty).
- 95,000 were provided special education services.
- 44,000 lived in homes where the primary language spoken is not English.

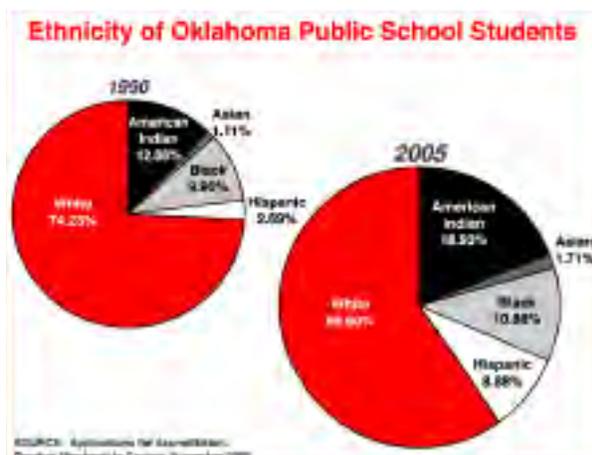
The number of Hispanic students in Oklahoma schools is increasing roughly 9 percent each year and 262 percent since the benchmark year of 1990. Hispanic students account for 8.8 percent of Oklahoma's student population, while Caucasian students now comprise less than 70 percent.

We continue working on ways to better address these challenges but they will persist as factors impacting every step toward our economic development goals. Those goals are:

1. *More college graduates.*
2. *More technologically proficient young people.*
3. *More creativity in every sector of our state.*

With these goals in mind, we should consider the recent successes Oklahoma's education reform efforts have produced:

- Oklahoma is recognized as one of the top states in implementing the federal *No Child Left Behind Act* primarily because of standards-based reform, accountability and school improvement efforts since 1990.
- Oklahoma is the No. 1 state in providing education for four-year-old children and the



national model for voluntary Pre-Kindergarten programs, according to the National Institute for Early Education Research.

- A June 2006 report from the National Center for Education Statistics of the U.S. Department of Education placed Oklahoma's high school graduation rate (for freshmen students who received their diploma in the traditional four years) as higher in 2004 than 2003, above the national average for both years, and exceeding that of all southern states.
- A February 2005 Manhattan-Institute report said Oklahoma's graduation rates and college-readiness indicators were above the national average in every category in 2003. Oklahoma ranked 9<sup>th</sup> overall in the 50-state ranking of graduation rates; and in the top five for Black and Hispanic student graduation rates.
- More Oklahoma students are earning college credit through Advanced Placement courses and concurrent enrollment than ever before.
- Additional resources on our state's progress are available in *Investing in Oklahoma, 2005: The Progress of Education Reform, Volume 9*, online at [www.sde.state.ok.us](http://www.sde.state.ok.us).

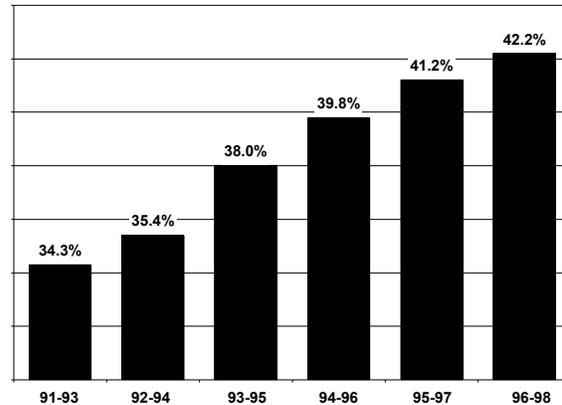
### Tomorrow's Actions:

In collaboration with our partners in Career Tech and higher education, Oklahoma has for some time offered rigorous college- and work-ready courses for students. In 2006, one thing is certain: High school students must be on track to be responsive to the demands of the 21<sup>st</sup> century. We are moving high school reform into high gear in each community because of rapidly changing technologies, an ever-growing body of knowledge; constantly changing workforce needs, and, the realities of global competition.

Job skills most employees have today will be obsolete in three to five years and experts say many of the top corporations expected in the year 2020 are nonexistent today. Knowledge-based

### Oklahoma College Completion Rate of Public High School Graduates

Each Report is based on Public High School Graduates in three-year increments SOURCE: Profiles State Report, 2000-2005, Office of Accountability, May 2006



workers need the skills of creativity, problem solving, communication and collaboration. Oklahomans with the right skills and those who can attain them quickly will be most successful.

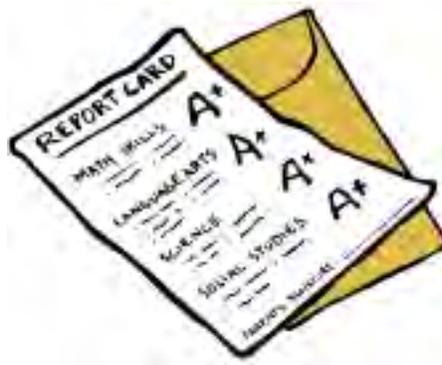
Bill Gates suggested three Rs of building better high schools: **relevance** (to the real world), **relationships** (with adults in school and at home), and **rigor** (in a challenging curriculum). At the State Superintendent's High School Summit in November 2005, hundreds of Oklahoma school and community leaders began redesigning high school programs based on these Rs and on the National Association of Secondary School Principals "Breaking Ranks" school improvement model.

Oklahoma's new Achieving Classroom Excellence (ACE) Act transitions our state into high-stakes testing for increased student accountability. ACE is transformational legislation with new graduation standards and end-of-instruction (EOI) exams required of all high school graduates. Beginning with 9<sup>th</sup> graders in 2008-09, students must pass Algebra I and English II tests and two of five other EOI tests (Algebra II, Biology I, English III, Geometry or U.S. History) in order to receive a diploma.

No single metric can tell Oklahomans in our next century if we have been successful in our time. Among the ones that should be considered are the number of college graduates, the number of mathematicians, scientists and technical experts in our state, and an increased level of creativity among our citizens.

(1) College graduation: Improvement in Oklahoma's college graduation rate is likely the result of increasing high school graduation rates coupled with better alignment of high school standards to college-entrance requirements, which started in our state with the Class of 2003. Oklahoma has done well in improving high school graduation rates (77 percent in 2004 compared to national average of 75 percent), in spite of the fact that Oklahoma has more rigorous graduation standards than many other states.<sup>1</sup> More must be done, however, to increase Oklahoma's college-going rate (52 percent to Oklahoma colleges in 2005) and to support students while in college.

(2) Targeted degree areas: It is not just the total number of college graduates that is important, because Oklahoma needs specific types of graduates and completion of specific courses of study for students who do not attend college. Oklahoma needs more certified technology and software experts, as well as degreed mathematicians and scientists. Traditionally and today, the majority of students graduating from our colleges of education seek elementary education certification. However, what we most need are secondary mathematics teachers, science teachers, foreign language teachers, special education teachers, speech pathologists and teachers who are bilingual.



In January 2006, Martin C. Jischke, president of Purdue University, reported that 20

years ago, the United States, China and Japan each graduated a similar number of engineers and more than twice the total of South Korea. By the year 2000, China, Japan and South Korea had significantly increased their engineering graduates while the U.S. had decreased its number by 20 percent. Jischke said, "We are falling behind in the production of people in science, engineering, technology and math, which is at the core of all three."<sup>2</sup>

This is a serious national security issue possibly requiring a level of involvement on par with America's response to the launch of Sputnik in 1957. When President Kennedy entered the "space race" in 1961 he compared Russia's lead to America's late start, and said: "For while we cannot guarantee that we shall one day be first, we can guarantee that any failure to make this effort will make us last." We simply must find new ways to increase the number of Oklahomans interested in math, science and technology. Ways include:

- Further developing rigorous high school programs that are relevant to the real world;
- Providing scholarships that will help recruit more math and science teachers;
- Making it a priority to upgrade the math and science skills of all teachers; and
- Creating new, privately funded, collaboratively developed programs that build relationships among working scientists, engineers, technology experts and Oklahoma's boys and girls.

(3) Creative culture: In the realm of economics, we are said to live in an "information" or "knowledge" economy but that information and knowledge needs a significant amount of creativity in order to predict products and services needed in the future. While creativity

cannot be bought or sold, nor turned on or off, having sufficient numbers of creative people in our state is a part of economic survival. Creativity comes in all the various colors, genders and personal preferences which are generated in America. Workplaces now have schedules, rules and dress codes that are more flexible to allow creativity. The creativity of children is a natural born trait that schools must encourage and develop, which is precisely what is happening in our Pre-Kindergarten programs.

We must bring more of these changes into every grade level. One way is through project-based learning (PBL), which puts students in a workplace style setting where they can collaborate, use critical-thinking, writing and oral communication skills, and develop work-ethic values while meeting state and national curriculum standards. PBL is more complex, rigorous and integrated than the traditional school. Projects tackle problems that require critical thinking.

This is a simple idea but not traditional schooling. It requires a paradigm shift in the thinking of parents as well as educators. For several years, the Partnership for 21<sup>st</sup> Century Skills (with partners that include most major technology corporations and education groups) has been evaluating that equation.

We are pursuing what the Partnership considers the “most valuable assets” to be “digital-age literacy, inventive thinking, effective communication and high productivity.” These skills can be measured by portfolio evaluation and by critique or grading of projects that relate directly to the process and content frameworks in Oklahoma’s *Priority Academic Student Skills* (PASS), the core curriculum.

### **The Bottom Line**

Changes of the magnitude necessary to reach our goals will not come easy nor will they be free. This does not change the fact that Oklahoma needs more college graduates, more mathematicians, scientists and technological experts, and a more creative society. Oklahoma has long lagged behind the rest of the nation in what it pays its teachers and what it spends on its public school students.

Despite the obvious funding deficiencies, we are ready to take our schools to the next level of ensuring Oklahomans can be successful in an increasingly competitive job market. The help of businesses that are performing in the economic growth sectors of science and technology is essential as we embrace creativity throughout our state and garner rank-and-file support for more rigorous educational requirements of students. Together, we can and will build schools capable of preparing all students for lives as productive, thoughtful and employable citizens.

### **NOTES**

<sup>1</sup> “Diplomas Count,” special national report from *Education Week*, June 20, 2006; and, “The Averaged Freshman Graduation Rate for Public High Schools From the Common Core of Data: School Years 2002–03 and 2003–04,” National Center for Education Statistics, U.S. Department of Education, June 20, 2006.

<sup>2</sup> “The Gathering Storm: Where is the Next Generation of Engineers and Scientists?” by Martin C. Jischke, *Vital Speeches of the Day*, page 269, February 15, 2006.

## ***A Bright Future for CareerTech Education***

*Phil Berkenbile, Ed.D., State Director*

*Oklahoma Department of Career and Technology Education, Stillwater*

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### **Today is an exciting time to live in Oklahoma.**

The growth and expansion of business and industry across the state is creating new opportunities for many of our citizens and new challenges for the CareerTech system. Because CareerTech is one of the cornerstones for Oklahoma's economic growth and workforce development, we're preparing students to make important contributions to the manufacturing, aerospace, and oil and gas industries as well as to the rapidly advancing fields of bio-medical, bio-technical, precision agriculture and nanotechnology.

Students from our programs in middle schools, high schools, and technology centers continue to excel at the national level—proof to everyone that our state's future is in good hands.

Although we have remained true to our mission to help Oklahomans succeed in the workplace, in education and in life, things have changed dramatically over the last few years and will continue to change even faster in the future—creating even more opportunities for CareerTech to serve the citizens of this great state. Since the early 1900s, we have helped shape the future of Oklahoma by preparing our students to achieve success. Today we are educating, training and retraining people to use new technologies and to explore new careers, not just for the present but also for the future.

In his book, *The World Is Flat*, Thomas Friedman explains, “We Americans will have to work harder, run faster and become smarter to make sure we get our share. But let us not underestimate our strengths or the innovation that could explode from the flat world when we really do connect all the knowledge centers together.”

CareerTech is meeting that challenge; we are teaching young people a wide variety of skills so they can succeed in this global, flat world economy and, at the same time, we are providing skill enhancement for employees of Oklahoma companies.

Our state is on the verge of greatness, but we must realize that this does not come without *cost*, *challenges* and *change*. Our lives in Oklahoma will need to change drastically to meet the needs of the future. We must convince our educational, business and political leaders that education involves all three entities—common education, higher education, and career and technology education—working together to establish partnerships, services and career pathways for all students—not just for the ones going on to college but also for the ones entering the workforce so that they, too, are qualified to earn a good living.

We cannot afford to have students drop out of school. Nationally, it is estimated that one out of every three students will drop out of school before obtaining a high school diploma. In a study released this year on California students by the James Irvine Foundation, 90 percent of the students surveyed said they would be more motivated by classes relevant to their future careers.

In the *Times* magazine article, “Dropout Nation,” one of the five recommendations was to “Support Vocational Education.” Again, relevance was an issue: “Many dropouts never see the connection between school and later life. Vocational education gives students real-world skills.”

So you see, it is not just about giving more tests, raising the bar, increasing technical skill levels and integrating more academics. It's about taking

students—all students—to the next level by using different learning styles and techniques, changing attitudes, providing soft skills, and teaching the best technical skills available (all the things we do best) to provide this relevance that students are looking for—relevance to real world situations and their future careers.

As times changed, so did our system to meet the new needs of education and business and industry. When high school academic and workplace standards increased, we integrated more math, science and reading into all content areas. To meet the future needs of our students, as well as the needs of the companies that will hire them, we have partnered with higher education to provide new pathways for students to earn college credit for technology center programs they take while still in high school or as adult students. It is now possible for students to earn a high school diploma, a CareerTech certification and an associate degree all at the same time. We have one of those success stories in Stillwater. The son of an elementary school principal began classes at Meridian Technology Center while still in high school. He is now earning certification in computer networking and security, obtaining college hours through an Alliance Agreement with Northern Oklahoma College and serving as a state officer in Business Professionals of America, one of the CareerTech student organizations, while simultaneously finishing requirements for graduation from Stillwater High School.

But, it's not just about going to college. Some of those same higher-level skills students use in college are now needed to meet the ever-changing world of work, and that's important for everyone to understand. And the skills taught—both technical and academic—should serve students well in their future. Not all students will go to college, but we must



prepare all students, through career pathways, for success at all levels.

The initiatives of Achieving Classroom Excellence (ACE) and Cooperative Alliances (which allow students to earn college credit for programs taken at our technology centers) are merging into a strategy, a strategy for Oklahoma CareerTech to be a pivotal influence in raising expectations for all students. CareerTech can serve a crucial role in making academics relevant while still providing support for successful transition to college without remediation or a successful transition to the world of work. In order for us to realize the opportunities provided to CareerTech through these two initiatives, CareerTech must rethink its philosophy of what the 21<sup>st</sup> Century can become in the terms of economic development.

Nearly one in five Oklahomans, ages 18 and over, report having completed a career-technical program, which makes it the most common level of educational attainment beyond high school with our state's workers. And with our help, the general trend of remediation rates for technology center students going on to college is decreasing at a faster rate than that of all students, falling 6.1 percent this past year.

Our state's system of career and technology education is an essential and vital part of the total education system and crucial to the success of business and industry in Oklahoma. CareerTech programs and services directly benefit the state's economic development. Business and industry training is critical to the success of Oklahoma in a world market. Technology centers annually exceed 350,000 enrollments in safety, technical, organizational development, management, and productivity training programs. Services for entrepreneurs and business start-ups, as well as government contracting, also

ensure continued vitality in the Oklahoma economy and around the world.

*Challenge* is just another word for *opportunity*—opportunity for new partnerships, opportunity to help form a stronger educational system in Oklahoma. As we look into the future, we will continue to look for new and innovative ways to meet the increasing needs of students, business and industry, and all Oklahomans. We must work to expand our Technology Center services and programs, increasing their accessibility to students, adults, and business and industry, while always keeping in mind that the customer is our main focus. If we are going to compete in the global economy, we need to look at different methods of delivery, new ways to fast-track students, and new courses to train students for future jobs in Oklahoma and around the world.

In Oklahoma's CareerTech system, we educate and train students in many locations—middle and high schools, technology centers, part-time and full-time programs, business and industry, online programs and skill centers (located in prisons) so coming up with just one metric or universal measurement is hard to do. The most widely accepted is positive placement, and in FY05 Oklahoma CareerTech's placement rate was 92.2 percent. This includes students who go directly into the workforce, join the military or continue their education.

All these areas impact Oklahoma's economy, and the return on investment to Oklahoma is great.

In the future, we will also use the number of industry-recognized credentials and economic impact as major metrics for our system. The number of industry-recognized credentials is an important measure of our ability to enroll and retain students and will be used in our Alliance partnership with higher education. Economic impact is currently used by our Training for Industry, Safety and Existing Industry programs and will be an important



measurement of economic investment in the future of Oklahoma.

As a system, we deliver programs, courses and services that encompass the knowledge and skills necessary for our students to achieve success wherever they go. Graduates of our programs come to CareerTech for the sole purpose of acquiring the knowledge, leadership and skills they need to ultimately compete successfully for employment. Oklahoma businesses, the nation and now the world need this infusion of skilled human capital to remain viable in an ever-growing, global marketplace. Simply put, the education and training we provide for these students, documented as completers, contribute to the success of business and industry and, consequently, the economic success of Oklahoma.

Education is not just about higher education or common education or career and technology education; it is about an educational system where all three entities work together to meet the future goals, needs and dreams of all students required to move our state forward. Career and technology education must remain industry-focused, performance-driven and student-centered to help Oklahomans succeed in the workplace, in education and in life.

## ***Charter Schools in Oklahoma***

*Dr. Freda Deskin, Executive Director/CEO*

*Advanced Science and Technology Education (ASTE) Charter Schools  
Oklahoma City*

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The greatest challenges for meeting the high levels of education needed for the economy of Oklahoma, as well as the nation, are many. Problems in education are systemic and involve many stakeholders: students, parents, educators, government, policy makers, business and industry and the community. We must rethink what we have been doing for years and come up with new paradigms based upon research and common sense.

It really DOES begin in the home. We must send a strong message publicly that family engagement in a child's education must be a priority. Most families are overextended with work and activities. In families with two parents, both are usually working. We know they are spending more time at work and more time in traffic than a decade ago. Additionally, children have more leisure-time options than ever before.

Parents often use the more passive leisure-time options such as the Internet and computers, TVs and Gameboys to occupy their children while they are away. Once home, children are being rushed to a myriad of physical activities which include lessons, clubs, church activities and sports.

With all these factors in play, little time or attention is paid to academics. Students often cannot stay after school to get help with lessons because of their busy after school schedules and parents have little time to assist them at home. School appears to have become an inconvenience to the present way of life in the United States.

Greater partnerships between schools and families must connect families and make them aware of the cost the lack of engagement has on the students' academic progress. Schools must make families feel like valued customers.

Through charter school legislation in Oklahoma, competition for students is allowing parents a

choice of schools. This competition will require that schools engage families and send them the message that they are not only welcome, but are expected to positively take an active part of their child's education.

With parents engaged, schools now have the responsibility of approaching teaching and learning in new and different ways. School administrators and faculty must decide what twentieth-century strategies are not working. They must be willing to explore and understand the latest research on instruction and they must be aware of the changing global trends that are and will continue to affect their students.

Beyond engaging parents, school administrators and teachers must do their part to be accountable. Student achievement correlates to effective teaching practices and the school environment. Administrator and teacher salaries must be realistically tied to student outcomes in many areas; not just to a test score.

Ineffective teachers often move from school district to school district, seeking a school where they can "fly under the radar" of an administrator who will not hold them accountable. There are many instruments to do this. Among them is the "clinical observation". This instrument quantifies the instructional behaviors based upon reach.

There is no statewide database that collects teacher performance data. This, along with the protection of unions, allows a teacher who is not performing and whose students did not perform to move on to another district undetected.

Dismissing a poor teacher is difficult and sometimes impossible. The time and money required is often more than what the school and administrator have at their disposal to fight the union that protects them.

Many current laws and the bureaucracies they create contribute to the deficits in our schools. Employment laws prevent employers from being honest about a teacher's performance. Poor teachers who do decide to leave a district, often receive good recommendations and are passed on to other unsuspecting districts.



The traditional public education is not what is best for all students.

There are many options for parents with some disposable income. Home schooling is not the answer for all students, but it is for some. The same is true of private schools,

parochial schools, virtual schools, traditional schools and public charter schools. Virtual schools, charters and vouchers have the potential of leveling the playing field for all socio-economic groups. This will not be done until officials put away their party politics and pass or change laws designed in the best interest of the student and society as a whole.

Bipartisan politics keeps laws that would allow for more competition for students among schools from passing or from improving upon existing laws. Public schools are one of the few areas where competition is considered unhealthy. Parents have choices in just about every area of their lives, except their child's pre-collegiate educational choice.

Charters do not receive facilities' funding and do not qualify as a state agency to receive the much lower state lease rates. Charters end up paying up to 20% of their budget for facilities. If charters enrollment is increasing and charters have waiting lists while receiving substantially less money than the traditional public schools, imagine what they could accomplish with full funding. This can only happen by passing new laws or changing existing ones.

Charter schools are non-sectarian, public schools of choice, operating in 39 states and the District of Columbia. These 3,600 accredited schools (up 13% from last year!) serve more than 1,000 students across the country. Charters are controversial among many of the traditional school administrators and teachers' unions.

Much like other professions, charter schools are non-union and there is no tenure. They are governed by a board of directors and operate on a business model. While they are held to high standards, they do operate with less bureaucracy.

The global changes in business and industry created mostly by technology is also having an impact on education, not only in Oklahoma and the nation, but in the world. We are now in real competition with countries such as China and India as never before. Students must be educated for these new realities. Students, parents, educators and society in general must be aware of these trends and create strategies to address them.

While legislation allowing charter schools in Oklahoma passed in 1999, many other laws prevent charters from performing as they were designed. Charters begin with a huge disadvantage. First, their very oversight is by the district that competes with them for students. The charters then pay an "administrative" fee of up to 5% to that district.

A new paradigm is necessary for our education system. Schools must see students and their families as customers and be willing to compete for these students by operating more as businesses and less like government agencies. It will take the efforts of everyone for this to happen.

We must realize that the "one size fits all" is pretty much a myth in all areas and especially when it comes to education. Children and their needs vary greatly. They have had different experiences and come from a variety of backgrounds and situations.

The one metric in assessing our educational system lies in our poverty rate. The better educated our communities, the lower the poverty rate and the crime rate will be. It isn't easy, but it is simple.

## ***The Importance of Early Learning***

*Nancy vonBargen, Executive Director, Smart Start Oklahoma  
Oklahoma City*

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*From the time of conception to the first day of kindergarten, development proceeds at a pace exceeding that of any subsequent stage of life. Efforts to understand this process have revealed the myriad and remarkable accomplishments of the early childhood period, as well as the serious problems that confront some young children and their families long before school entry. What happens during the first months and years of life matters a lot, not because this period of development provides an indelible blueprint for adult well-being, but because it sets either a sturdy or fragile foundation for what follows. From “Neurons to Neighborhoods”*

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We all understand that educational opportunity shapes employment status, wages, and general well-being to a greater extent than ever before. But what is not always understood is that education begins at birth. Young children need nurturing, quality environments to develop the intellectual, physical, behavioral, social and emotional abilities that form the critical foundation for later success in school and in life.

Environmental influences not only affect a child’s general development but actually affect the physical architecture of the brain, literally shaping the neural connections as the brain develops.

Parents have the greatest impact on a child’s development. Positive parenting practices such as responsive caregiving, positive discipline, language and learning activities, and playful interactions contribute to a sturdy foundation. With less access to extended families, parents from all economic backgrounds tell us that they lack information and awareness of resources for what they recognize as their most important job. And many children enter school with challenges that include never having spoken English, living in poverty or having been exposed to violent situations.

Some children have never seen a doctor or dentist, do not communicate well, or have never sat down for a family meal.

*“Emergent literacy knowledge and skills that children bring to first grade from prior experiences in*

*their homes, preschool centers and kindergartens are critical determinants of how well they will learn to read in elementary school. In turn, how well they learn to read in elementary school is a critical determinant of their lifelong career and economic prospects.” (The Roots of School Readiness in Social and Emotional Development, 2002).*

Early learning occurs regardless of where a child spends his or her time. Most children spend time in various settings – with their parents, relatives, teachers at a mother’s day out program, preschool, child care, church or other faith-based setting. Many parents choose care with family members, friends and neighbors for a variety of reasons, including a shortage of licensed care during evening and weekends.

In an ideal world, mothers or fathers would have the opportunity to stay at home with their child for at least the first three years of life. In other industrialized countries, parents receive paid parental leave for at least a year. We should seek ways to allow mothers and fathers to be more available to their families upon the arrival of a young child and provide more viable choices of whether or when to return to the workforce. This dream is out of reach for many families: statistics indicate that almost half of all Oklahoma children

birth to five live in low-income families. We must face the reality that fifty-four percent live in homes where a single parent or both parents work outside the home. Our challenge is to ensure that everyone who spends time



with young children has the knowledge and resources to nurture, teach and protect that child.

Being ready for school and life goes beyond knowing letters, numbers and how to count, as important as those skills are. In order to focus on learning, many children need access to improved nutrition and health care. Kindergarten teachers report that skills such as the ability to listen and pay attention, follow directions, and get along with children as well as enthusiasm for learning can be even more critical than cognitive knowledge.

Gaining social and emotional skills enables children to learn from teachers, make friends, appropriately express thoughts and feelings, and cope with frustration. A recent national report noted that the pre-kindergarten expulsion rate for state public preschool programs was over three times higher than the rate of K-12 students. Rather than expelling these children, we need to determine why so many children are lacking the social and emotional skills needed to succeed in school.

Many Oklahoma parents are struggling to improve their earning potential so that they can provide for their children. Despite hard work and dedication to their children, too many live in fear of having to choose between work and making sure that their children are in a safe environment.

The research is clear that the quality of early education settings has a lasting impact on children's well-being and ability to learn. Low-income working families whose children would benefit the most from quality settings are those least able to afford it.

In 2005, the average cost of full-time, licensed, center-based care for an infant was \$115 a week or almost \$6,000 a year – more than college tuition and fees at the state's universities. The child care assistance program at the Oklahoma Department of Human Services helps families pay for child care for over 44,000 children, but many still struggle at a time when their earnings are at a lower level and they haven't had time to save for this essential service.



As expensive as child care is, teachers are terribly underpaid, with the average starting wage at \$6.24/hour. As a result, more than one-third quit their jobs each year, making it difficult for children and parents to form meaningful, trusting relationships with them.

Oklahoma can be proud of many innovative programs for families of young children. Some examples include a voluntary public school pre-kindergarten program that serves 70% of the state's four year olds; Children First and Oklahoma Parents as Teachers where parents receive resources and encouragement; Reaching for the Stars, a quality rating system that encourages child care programs to improve the quality of care; the Oklahoma Child Care Resource and Referral Association that helps parents find and evaluate child care; and Sooner Start, an early intervention program serving infants and toddlers with developmental delays. But many of these programs are unable to reach all families that need and desire services.

Early Head Start and Head Start are national, high quality early education programs that provide comprehensive education, health, nutrition, and social services to the state's most needy children and their families. Funding has not kept pace with the number of eligible children in recent years. National data in 2003 reflects that about half of all eligible preschool age children were served by Head Start and less than 3 percent of eligible infants and toddlers were served by Early Head Start.

While several major longitudinal studies are clear in their findings, how can we measure the impact of strong families and quality, accessible early education settings on Oklahoma's children? While there are benchmarks throughout a child's educational career beginning with third grade reading scores, success should ultimately be reflected in improved high school graduation rates. If children enter school ready to succeed, it will change the entire trajectory of their lives. In a 2004 survey, Oklahoma kindergarten teachers reported that 23% of their students were not ready to successfully participate in school.

I would propose that it is no coincidence that the public high school graduation rate for the class of 2004 was 77%. We know that remediation is expensive and rarely as effective as preventing delays from the start. Children who leave first grade significantly behind their peers have only a one in eight chance of catching up.

The Committee on Economic Development states “early environments play a large role in shaping later outcomes. Skill begets skill and learning begets more learning. Early advantages cumulate; so do early disadvantages. Later remediation of early deficits is costly, and often prohibitively so.” Investments in high quality early learning programs consistently generate benefit-cost ratios exceeding 3-to-1 due to greater school achievement, reduced need for special education services, higher graduation rates, higher adult earnings and decreased contact with the juvenile and criminal justice system.

Smart Start Oklahoma is a public-private partnership that works to improve services for families of young children at both the state and community level. Their vision is that all Oklahoma children are safe, healthy, eager to learn and ready to succeed when they enter school.

How does Oklahoma make progress toward that vision? By making families with young children a priority. By asking the question “is it good for children” whenever we decide state policies, set funding priorities, participate in local neighborhood planning, design workplace policies, or cast a vote. While cognitive development is critical, we must also address the other factors that impact school readiness: health, nutrition, social and emotional development, safe neighborhoods, and a joy of learning. And lastly, by each of us reaching out to young children in our communities through volunteering, financial contributions, and offering a helping hand to those less fortunate than ourselves.

The care and protection of children is a fundamental moral responsibility. How we support children and their families is a reflection of who we are and the kind of world in which we want to live.

### ***Early Childhood Update*** ***Craig Knutson, Academy Research Coordinator***

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On a recent trip to Chicago, I spent part of my morning reading the Chicago Tribune Magazine. One article, entitled “Sandbox Cum Laude,” (see Anne Robert’s article “Building Skyscrapers in the Sand” later in this chapter) caught my eye and made me realize the importance of LONG-TERM thinking and investment.

The article highlighted the importance of **leadership** (Illinois Governor Rod Blagojevich, and others), **quality curriculum**, and **investment** in the area of early childhood education. It is the story about how a new state law promises free pre-school to ALL kids and the anticipated hurdles the state will likely face. It is the type of BOLD leadership and across-the-board collaboration that is critical.

“Preschool for All”, the Illinois initiative that took effect July 1 of this year, made Illinois the FIRST state in the U.S. to promise free pre-kindergarten to virtually every 3- and 4-year old whose parents want it! The Illinois plan requires that teachers have college degrees and “sets forth a well-crafted curriculum that focuses on how children develop emotionally and socially, as well as whether they are learning to read and count.” The article cites the well-documented benefits of why this investment is so critical: higher school performance, greater productivity, and reduced criminality.

But it has a parallel focus on the children and the primary conduit of change”— qualified teachers. The combination should deliver positive outcomes for their respective lifetimes. And the Governor’s commitment was based upon “something you learn in Sunday School, “try to do for all Illinois families what you do for your family.” His daughter’s experiences and outcomes going through a Montessori preschool convinced him (and his wife) that this had to be done.

The road to success was not easy: “The governor has no intentions of ever funding this. This is a governor with policy attention-deficit disorder,” so stated a prominent State Senator. Unfortunately, that rhetoric sounds much like the mud slinging we’ve been hearing in Oklahoma recently. The Illinois blueprint for this initiative is available; with all the successes this State has achieved in early childhood, especially with the Kaiser and Inasmuch Foundations backing, all we lack is some “leadership at the top.” Who’s willing to step forward?

## ***A New Paradigm, Support Students Instead of Institutions***

*C. Gene Stephenson, Ph.D., President, Oklahoma Independent Colleges & Universities  
Edmond*

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For the past century, agriculture and petroleum have dominated Oklahoma's economy.

Manufacturing has played a limited role in the past fifty years. In the Twenty-First century, ideas and knowledge will become the principal driver of all sectors of the economy. Consequently, higher education will be the key to a strong Oklahoma economy. Nationally, public higher education is trending toward a privatized system, and this fact should be addressed in Oklahoma now.

Public higher education came into being with the Morrill Act of 1862. With its beginning as a state in 1907, Oklahoma developed an egalitarian system of higher education that attempted to reach out to as many of its citizens as possible. Regional universities and community colleges were established to reach every corner of the state.

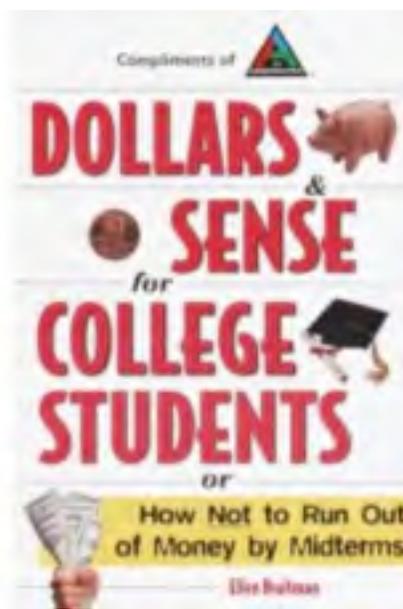
In Oklahoma, accessibility has been the fundamental principle, not only physical accessibility, but also financial accessibility. Since its establishment, the concept has been for taxpayers to pay more in the form of support to public colleges and universities and the individual to pay less in the form of tuition. In other words, low tuition would mean more students could go to school. For much of the twentieth century, that ratio was about two to one. The ratio has rapidly changed to one to one. In FY 96, state appropriations were 62% of the Educational and General budgets of the public system. Tuition and other sources were 38%. For FY 06, the ratios were virtually 50% and 50%. The question is, what will happen to these ratios in the next one hundred years? What will our system look like if these ratios go to 25% -75% or even 10% - 90%?

In FY 80, higher education received 18.5% of the state's budget. In FY 06, higher education

received 14.7%. Some prognosticators predict that nationally, higher education's portion of state budgets will eventually become zero. Their reasoning is that the persons receiving the service can afford to pay for it, in the form of tuition, even if they have to borrow the money to do so; whereas, services such as Medicaid, law enforcement or roads cannot generate revenue to support the service.

Based on current popular opinion of higher education in Oklahoma, it is probably not likely that state support for higher education will go away; however, there is strong evidence that the percentage of the state budget will continue to decrease. This, in turn, will require tuition to become a larger percent of the revenue stream.

What is happening as students pay more and more of their cost of education? In effect, public colleges and universities are essentially becoming like private institutions. Not only that, but without



significant changes in student financial aid, those students from lower income families will be forced out of the system. This shift in funding of public higher education requires new thinking as to how to best manage the resources that the state is investing in higher education.

The model that seems to fit the growing trend best is the one used by the federal government: fund the students on the basis of financial need and let them take the money where they want to go, whether it be a public or private institution. Under the current model of funding institutions, those who can afford to pay receive the same benefit from the state as those who cannot. By shifting the funding to the student on the basis of financial need, the state could actually shift resources for use in critical areas, such as recruiting more low-income students.

Let us see how that would work.

In FY 06, the institutions in the state system spent approximately \$11,500 to educate each of 133,400 full-time equivalent students. The weighted average tuition for those students was approximately \$4,300 per FTE student. Hence, tuition paid about \$573 million of the \$1.53 billion of the educational cost, which is approximately 37%. State appropriations funded 50% (\$5,750 per student) and other sources of revenue contributed 13% (\$1,495).

What if every student, resident and non-resident, were charged the \$11,500? And, what if, in order to relieve the burden of the extremely high tuition, the state spent all of its money on need-based student financial aid rather than funding the institutions?

Obviously, some students would not have to pay any (or very little) tuition and some students would have to pay their entire (or almost the entire) cost

of their education. The students in the latter group are the ones currently benefiting from the “support institutions” system. Each of these students is benefiting from the \$5,750 that the state gives to educate them, although they can afford to pay the total cost.

Complete family financial information is not regularly collected except for those students applying for federal financial aid. However, the literature seems to indicate that somewhere between 15 to 30 percent of the current subsidy could be saved or redirected by funding students on a need-based formula.

In addition to distributing the state’s resources in an equitable manner, there are other potential benefits from funding students rather than institutions. If public institutions become “privatized” it would require them to compete in the marketplace for students. In all likelihood, they would be forced to focus on the quality of its graduates. Parental pressure would probably result in fewer dropped classes, better counseling and shorter time to graduation.

With reduced public control, public institutions could change more rapidly to meet societal needs. On the other hand, the state could enhance student subsidies in those areas that are critical to the state, such as nursing is today.

Some would question as to whether the public system of higher education would remain viable. Public institutions would want to retain some state support for research and public service and no doubt, the state would want to continue to provide for those efforts.

Public higher education systems exist at all levels of support and control across the United States. There is not any fundamental reason why it could not be the same in Oklahoma.

## *Bridging to the Future in Muskogee*

*Wren Stratton, Mayor, City of Muskogee*

When evaluating the values and attitudes of Oklahoman's, "looking back" over this century focuses your attention on a challenging time for our state. The Great Depression and dustbowl days resulted in a mass exodus to states west in search of employment. The values and attitudes which remain with us as we march into the 21st century are still burdened with those memories.

Couple that with a bold pioneer spirit of independence which still exists in each community and you have the map for public education, K-12, for our state. The percentage of high school graduates that follow a constructive path (i.e., college, employment, military, etc.) to community membership is the metric of success that I propose we use to measure the ability of education to prepare us for the next century.

This metric can best be measured by any one or all of the following data points (percentages); the percent of 9th graders who graduate from high school, the percent of high school graduates who enter college, the percent of graduates who have a job (wage greater than \$12/hr with benefits) within 6 months of graduation, the percent of graduates who enter military service within 6 months of graduation. If Oklahoma is to ensure the future wellbeing of each of its citizens, then it must provide an educational system which can prepare a workforce capable of sustaining that future.

There is an increasing number of youth "disconnecting" from the traditional K-12 model and adding a burden to an

unemployable number of citizens. Educators have tried to convince us that "every child should go to college." This has ignored the wide range of students who choose alternative career paths which include vocational and skill training. It is time to acknowledge that in our global economy of the future we should study our world competitor's methods. South American and Asian countries begin to identify avenues for their students as young as third grade.

We have understood the necessity for career laddering to ensure that adults can pass from vocational/skill levels of training to college levels. K-12 education however has ignored these "adult" models." Seamless education opportunities should exist for the child as well as the adult. It is time now to look to measurements for the individual's success which address productive community membership.'

Early learning focus should restructure around core subjects. Significant portions of our state have 20%-30% of adults at the lowest literacy level.

Literacy should become a priority for every community at every level. The ability to read is fundamental to the future of Oklahoma. The ethereal premise of "no child left behind" becomes

very concrete when you realize what happens to children who can not read. Basic math should also become an imperative. Children should not be allowed to progress until basic skills are attained.

Testing should begin early to identify those students whose



curriculum should include honors classes and college tract material versus those students whose curriculum needs to include vocational/skill training elements. The challenge as we begin to tract students is overcoming any stereotypical assumptions about vocational pathways. The plan is to graduate from the education system prepared to support your self and provide a workforce necessary to the future of Oklahoma.

The reality is that all levels of workforce are necessary and students should be receiving intensive counseling related to their futures.

High school once again is going to require an increased financial investment. According to a 2003 survey U. S. students begin on equal footing.

Fourth-graders score well in the math and sciences but begin to slide by the eighth grade and sink further by high school. The survey placed U.S. students 24th in math and science among the 28 industrialized countries surveyed.

Students of all races must show academic progress. Gaming the scoring system will not be acceptable for success. A 2000 survey revealed 38 percent of math instructors and 28 percent of science instructors lacked the appropriate math or science major to fill the classroom roles assigned to them.

Teachers of both math and science must be qualified to teach these subjects as mediocrity in these areas is not an option. AP and Honors Classes should be widely available and end of course testing required. I recently met with a group of high school honors students who recognized and verbalized their frustration with the “dumbing down” of honors classes. Objective standards for graduation must be maintained and applied.

Nationally and certainly in Oklahoma, we have an alarming number of young people who are being lost from the system. In Oklahoma, and similarly in Muskogee, 29% of our students fail to graduate from high school. 82% of the crime committed in our community last year was the results of youth

less than 25. The drain on our economy is difficult to measure but undoubtedly far reaching.

Alternative education must be available in such a way that reaches out to this group in a more individualized format. . Campuses need to have flexible settings and entrance requirements.

Curriculums must be perceived as relevant which means career counseling is intensive and individualized. Partnerships with business, in Muskogee through our Chamber of Commerce, have taken a growing role in the public schools mentoring program.

By 2010 we are forecasting the bulk of employment in Northeastern Oklahoma will include trade and service. Manufacturing and construction fall to third and fourth. How is education adapting to these predictions? A company plant manager recently complained to me that they have trouble finding numbers of applicants who can pass their literacy test. Another company declined our community as a site for development because when they advertised they couldn't find an adequate number of licensed fork lift drivers. As a Mayor charged with producing growth in a community, these are disturbing reports.

A basic core value still held by the majority of Oklahomans is the ability to take care of self and family. It is in the heart and spirit of each Oklahoman to reach for independence. The ability to hold and maintain a job is inherent to that independence. Our education system must be overhauled to prepare a workforce to sustain Oklahoma's future.

Traditional measures such as scholarship money, or numbers matriculating to college, are but a fraction of what the educational system should be calling their successful goal. The measurements defined earlier, such as the percentage of high school graduates that follow a constructive path to community membership, are the most predictive of our progress towards the future.

## ***SODA: Assistance. Advocacy. Answers on Aging.***

*Kathy D. Blair, Director, Southern Oklahoma Development Association,  
Area Agency on Aging, Durant*

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*Two pretty SE OK ladies:  
Kathy Blair (standing) and her  
grandmother Margaret Duke*

In a world where the elderly live, the demographics for this population changes daily. Beginning with the year 2006 the Baby Boomers will have arrived.

In 2012, according to Daniel Perry, Executive Director for the Alliance on Aging, 10,000 people a day will be turning 65 (Medical Never-Never Land – Ten Reasons Why America is Not Ready for the Coming Age Boom; Alliance for Aging Research; 2002).

This number staggers the imagination for many reasons. One is that everything that we have done to this point for the aging population has been a prelude to what is about to happen. Secondly, according to the Ten Reasons Why America's Not Ready for the Coming Age Boom, is just that, as a society we are not ready. The Report noted that:

*American psychology does not want to acknowledge aging on a personal level. This is part of reason why we have created Medical Never-Never Land: denying the graying of the population seeking health care, and blind to the need to train all health providers in age-appropriate medical techniques.*

There is a constant reminder that the demands are not being met. The gap that exists between care and need widens every day. The Report delineates ten reasons as to why America's health professionals are not being adequately prepared.

The report stated that addressing these barriers is paramount to a successful transition from middle age to elderly. The ten reasons as stated in the report were:

1. *Age Denial*
2. *Older patients Marginalized*
3. *Lack of Public Awareness of the Geriatrics Gap*
4. *Scarcity of Academic Leaders*
5. *Lack of Academic Infrastructure in Geriatrics*
6. *Geriatric Medicine Not Valued*
7. *Inadequate Reimbursement*
8. *Lack of Coordination within Medicine*
9. *Clinical Trials Do Not Include the Aged*
10. *Little Research on the Aging Process*

At the time this Report was written they were anticipating the approaching Baby Boomers. The Report noted that little time remained "to overcome the 10 barriers before" they started turning 60. Well, they have started turning 60 and the barriers are still in place.

If anything, according to Josefina Carbonell (May 2, 2006), Assistant Secretary for Aging in the United States Department of Health and Human Services, priority must be given to the Older Americans Act to meet the increasing needs and burdens the aging will put on society. What

Assistant Secretary Carbonell stated in her testimony to Congress is that there is a prevailing culture toward the elderly that needs to be changed.

That if we are truly going to value people as they get older we need to provide them with the assistance that they require. The assistance that is needed would be better served by modernizing the OAA to the “current and emerging needs of this country for efficient and cost-effective home and community-based long-term care”. She continues in her testimony to Congress by noting that these strategies that need to be incorporated into the Act are designed to strengthen the capacity to promote the dignity and independence of older people, and to prevail upon the mission and capabilities of the OAA. This would include:

1. Empowering people to make informed decisions about their health and long-term care options, and making it easier for consumers to access the care they need;
2. Helping older people who are at high-risk of nursing home placement to remain at home;
3. Empowering seniors to stay active and healthy;
4. To promote the development of a comprehensive and coordinated system of support at the federal, state, and local level making community-based services available to the elderly, especially those who are at risk of losing their independence;
5. To help prevent disease and disability through community-based activities; and
6. To support the efforts of family caregivers who are struggling to keep their loved ones at home.

The National Association of Area Agencies on Aging (n4a) has become a leading voice for the elderly. N4A’s primary mission is ensuring that older adults are valued and supported as they age. N4A is devoted to improving the ability of its members to:

- Advocate on behalf of older adults, person with disabilities and their caregivers;

- Take action to ensure that communities are equipped to support and enhance the well being of older adults, persons with disabilities and their caregivers; and
- Serve as the focal point in their community for answers on aging.

N4a, the American Society on Aging and Josefina Carbonell in her testimony before Congress believe that the most prudent course of action would be to enhance and support the reauthorization of the Older Americans Act.

The most obvious need to enhance this act is to reauthorize it with additional new money; however, in her testimony Assistant Secretary Carbonell noted the following would also enhance the viability of the OAA:

*The reauthorization of the OAA provides a unique and timely vehicle to accelerate the changes needed in long-term care policy to help our nation fully prepare for the aging of the baby boom and emergence of long-term living as a common experience of life.*

Before much of this though can happen there needs to be fundamental shift in how the United States prepares individuals to work with the elderly. What I mean by a fundamental shift is that we, in Oklahoma and across the country, need to look at how we are going to provide this long-term care, and where are we going to get the caregivers.

As the Baby Boomers move into old age the need for qualified individuals will increase dramatically. For many years Claude Pepper, a United States Representative from the state of Florida, championed the causes of the elderly in Congress. Through his efforts programs for elderly flourished and as a society we began to view the elderly in a different light.

His National Institute on Aging has become a force to promote the acceptance and well being of the elderly. However, since his death in 1989 the momentum has decreased.

The challenges that are before this county are many and complex. A cultural shift needs to occur in this country before it collapses under the weight of the 65 million Baby Boomers.

Part of Representative Pepper's legacy is the National Institute on Aging. The Pepper Center, located on the campus of the University of Connecticut, serves the aging to promote "older Americans maintaining independence for as long as possible. The research at the Pepper Center supports working on ways to delay or even prevent chronic diseases that can disable some and cause them to become dependent on others. As an educational resource the Center also works to educate and encourage older adults, sharing free health promotions in ways we can improve our health and better our lives".

Most of the research used for this article discusses the aspect of education. Not just educating the masses about the elderly, but providing educational opportunities to train providers and caregivers. States will need to begin to take inventory of their educational needs. This is a chronic problem that needs to be addressed. Research conducted at the Pepper Center on Aging as it looked into the problem of education concluded that there needs to be research training and career development opportunities for future academic leaders in geriatrics and gerontology by:

1. Developing new curricula in aging research and integrating these with existing clinical training programs;
2. Tailoring clinical research education to the individual needs of faculty and trainees; and
3. Providing technical support and mentorship for investigators in the design and conduct of clinical research projects, including presentation results and development of grant applications.



In the coming months and years there will considerable focus on the elderly, and the care for the elderly. The OAA and educational opportunities represent vital support and a necessary vision to protect the nation's ever-growing, ever-changing older population.

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***Our Disabled Citizens in Oklahoma***

*Kathleen Miller, Director, Research & Economic Analysis  
Oklahoma Department of Commerce*

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***IN MEMORY - KATHLEEN MILLER***

## ***Impact of Family Structure on Children and Their Economic Futures***

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*Oklahoma Department of Human Services*

*Oklahoma City*

Family life in America has a glorious tradition. From 1776 to 1960, it is estimated that almost 90% of America's children enjoyed the benefits of both parents. However, over the last 45 years, the traditional nuclear family structure has suffered serious setbacks.

In 1960, less than 10% of all first births to mothers were conceived out of wedlock. Today, slightly more than 50% of all first births are conceived out of wedlock. Co-habitation was virtually unheard of thirty years ago. In fact, cohabitation doubled from about 5% of households with children in 1990 to 10% of households in 2000 and is presently estimated at about 13% of households with children. In 1970, only 12% of families with children were headed by a single mother, whereas in 2003, it reached 26%.

According to a Census Bureau report, 1.5 million American babies, a new record, were born out of wedlock in 2004. This represents slightly more than 35% of all American births, also a new record. The Fragile Families study indicates that about 20% of the couples that have a child out of wedlock have already severed their relationship prior to birth.

The research also shows that, on average, the children of couples who marry and divorce do better on child well-being indicators than the children whose parents never marry. Oklahoma faces similar changes in family structure.

However, some of these changes are more significant. Oklahoma has the fifth highest divorce rate in the nation (1998 data), seventh highest teen birth rate (2003 data), and is thirteenth highest in percent of all births to unmarried women (2001-02 period). In fact, the percent of births to unmarried women in



Oklahoma has increased from 33.7% during 1999-2000 to 35.8% in 2001-02 period, the 2<sup>nd</sup> highest increase in the nation.

This poor trend line remains strong. Today's youth face seemingly insurmountable hurdles due to these changes in family structure. The rise in rates of cohabitation, the decrease in marriage rates, the increase in out-of-wedlock childbearing, and the increase in single-parent families have lasting adverse effects on children and increased demands on grandparents who are often called upon to assume

the parenting responsibilities of the so-called "boomerang generation"—persons 18 to 30 who left home, but returned later, often with a young child. According to Robert Lerman (1996), these changes increase inequality in society and increase child poverty rates.

In order to think of a solution for this complex problem, we need to find the root causes of this predicament. Where should we start? There are a couple of ways to view the path to negative societal outcomes. Research shows that people with a lower income and a lower level of education are less likely to marry or stay married.

If we view poverty as the root cause, then policies aimed at reducing poverty such as job training, increased availability of education programs for low-income people, increased minimum wage for low-skilled workers, and unemployment-reduction policies would be beneficial in making these people more attractive candidates for marriage and more capable parents for their children.

One could also see the problem as originating in the changes that have taken place in the traditional family

structure. Research indicates that compared to children whose parents were married, children of divorced parents have more difficulty establishing trusting relationships and are more likely to pursue cohabiting relationships which are more fragile than married couple relationships.

Further, out-of-wedlock childbearing and divorce are often short cuts to poverty. Research shows that, on average, children reared in single parent families or living with cohabiting parents or stepparents are much more likely to live in poverty. These children are also more likely to engage in criminal behavior, have poor overall health, drink and use drugs, drop out of school, perform poorly in school, and have children out-of-wedlock themselves.

According to data published by the Urban Institute in 2002, the poverty rate for children in single-mother families was approximately 38% and for children living with cohabiting parents it was over 26%, while for children living in married-couple families the rate was about 8%. Research also indicates that, on average, children who are reared in nuclear (biological) two-parent families have the best outcomes. This does not mean that children reared in single parent households or blended families cannot outperform children reared in nuclear families.

However, the average outcomes of children who come from nuclear families beat those of any other family structure.

Research shows that, in general, a healthy marriage is not only beneficial to the children raised in married, nuclear families, but is also beneficial to men and women who are married. According to Waite and Gallagher (2000), men and women both benefit from marriage, although in different ways. Men benefit more from marriage than women, on average, and men see primarily health benefits, whereas women see primarily economic benefits from marriage. Stephen Nock (1998) also found that married men have higher earnings than unmarried men. But the causality could go either way.

Therefore, as we see an increase in the number of single-parent families and cohabiting parents, we need to realize that there are potentially serious negative outcomes for these families and the society as a whole. Not only does policy need to promote healthy marriage but it also needs to address the harm to society created by our changing family structure.

We also know the harm done to children from living in poverty. What we need to focus on is the fact that poverty, lack of education and training, and high unemployment rates among these families are also major challenges to the promotion of healthy two-parent nuclear families.

Policies addressing these issues are just as important in promoting marriage and supporting healthy family structure. Paul Amato (2005) suggests supplementing marriage-strengthening policies with other programs that improve economic well being (such as increased minimum wage), strengthen parent-child and parent-to-parent bonds, and ease the stress experienced by children in single parent and stepparent households. McLanahan, Donahue, and Ron Haskins (2005) recommend modifying tax and transfer programs in order to remove the marriage penalties and disincentives in current policies and improve the economic security of children that would lead to the development of healthy children.

How will we know when the situation has improved? Since measures of healthy family structures and measures of child and adult well being are highly correlated, we can state that if the percentage of Oklahoma's children growing up with both biological parents in a stable, healthy marriage increases, then child and adult health status will improve and indicators of child wellbeing will also improve. Developing strategies to promote healthy family structures, which include poverty reduction policies that help families reach economic self-sufficiency, may be the most important thing Oklahoma can do to improve its economy, its health status and its quality of life.

***Developing strategies to promote healthy family structures, which include poverty reduction policies that help families reach economic self-sufficiency, may be the most important thing Oklahoma can do to improve its economy, its health status and its quality of life.***

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## NOTES

## *An Essay: Illegitimacy is Prosperity's Archenemy*

*Michael Lapolla, Lecturer, University of Oklahoma College of Public Health  
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There is a saying in the Army that "2% never get the word." One wonders if Oklahoma represents the 2% of states who never got the word about welfare reform - or at least seems immune to the designed incentives to reduce illegitimacy.

The accompanying charts shows the percentage of birth that are illegitimate since 1975. Both the Oklahoma and national rate were on a steep curve until 1994. Then the nation adjusted course while Oklahoma continued climb on the same trend line and even apparently accelerate..

One may conclude that the disincentives created in 1994 were effective in modifying national behavior but were impotent (pardon the pun) in changing the behavior of Oklahomans.

The data are even more alarming when examined by age band and by race. It gets worse the younger the mother and minorities have higher rates than whites. The accompanying chart would suggest that recent increases in the rates are likely due to whites rather than minorities. A geographic analysis is beyond the scope of this paper.

Our public policy debates are always about two degrees of freedom from hand-wringing about poverty and how to minimize it. The accompanying article by Bina Patel quotes Robert Rector: "Out-of-wedlock childbearing and single parenthood are the principal causes of child poverty and welfare dependence in the U.S." One also recalls the observations made by John Naisbitt in Megatrends that said "94% of poverty is likely caused by the failure to form a functioning family."

Let's look at poverty as a condition, not a disease. How does one qualify for the poverty descriptor? They do so via income measurements. How does a healthy two-parent family generate so little income as to earn less than the poverty level? It is arithmetically very difficult in today's society and economy. The shortcut to poverty is to knowingly and willingly father and bear children out of wedlock.

A reduction in teens fathering and bearing children out of wedlock will do more to cure poverty in America than any other government program or private initiative.

There are those that are - by now - appalled at this collection of "insensitive and politically incorrect" observations. There are others that are saying "you can't blame the victim." Still others cringe and become distracted with the term "illegitimate" and debate using "softer" descriptions.

Fine.

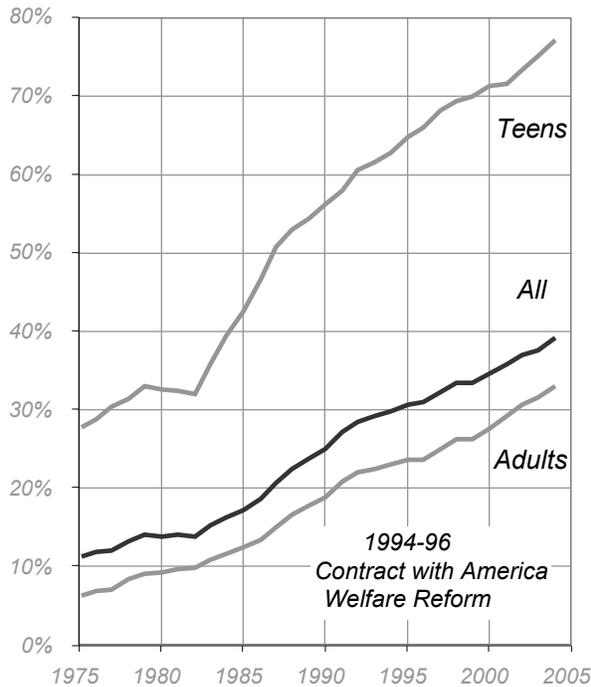
Now study at the charts accompanying this text and you tell me what conclusion one is supposed to reach? Stare at that chart and tell me what caused this rapid growth since 1975. Look at the chart accompanying Ms. Patel's analysis that charts illegitimate births since 1940. Can you see the impact of the "War on Poverty" in 1965? But most importantly - stare at the charts and explain to yourself the divergence in trends we see beginning in 1995. If family structure and prosperity are linked - are we simply pulling against ourselves? What are Oklahomans thinking?

It is time for all of us to get past the PC aversion to social sanctions of illegitimacy. If we are really serious about "creating prosperity" - then perhaps the first step is to get serious about forthrightly discouraging and reducing illegitimacy. Just as we labor to reduce the "stigma" of mental illness - perhaps we should rediscover the stigma of illegitimacy.

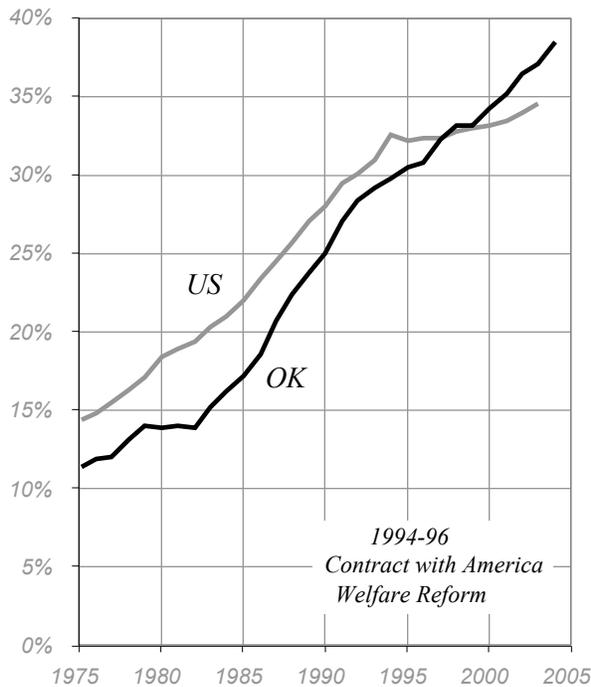
The last time I checked, illegitimacy is a choice - admittedly a bad or unfortunate one - sometimes unavoidable - but a choice nonetheless. Take another look at the charts. What is it that the rest of the nation knows that Oklahomans do not?

One response I have heard is that perhaps the abortion rate in Oklahoma is too low. I don't even want to go there. We can do better than that.

**Oklahoma  
Illegitimate Birth Rates**



**Oklahoma and United States  
Illegitimate Birth Rates - All Births**



**PROVISION 3  
CONTRACT WITH AMERICA**

*3. THE PERSONAL RESPONSIBILITY ACT: Discourage illegitimacy and teen pregnancy by prohibiting welfare to minor mothers and denying increased AFDC for additional children while on welfare, cut spending for welfare programs, and enact a tough two-years-and-out provision with work requirements to promote individual responsibility.*

*Reducing Illegitimacy The bill is designed to diminish the number of teenage pregnancies and illegitimate births. It prohibits AFDC payments and housing benefits to mothers under age 18 who give birth to out-of-wedlock children. The state has the option of extending this prohibition to mothers ages 18, 19, and 20. The savings generated from this provision to deny AFDC to minor mothers (and to mothers age 18 to 20 if the state elects that option) is returned to the states in the form of block grants to provide services — but not cash payments — to help these young mothers with illegitimate children. The state will use the funds for programs to reduce out-of-wedlock pregnancies, to promote adoption, to establish and operate orphan-ages, to establish and operate residential group homes for unwed mothers, or for any purpose the state deems appropriate. None of the funds may be used for abortion services or abortion counseling.*

*The bill also includes a number of other provisions to reduce illegitimacy. While AFDC is prohibited to mothers ages 17 and younger who have children out of wedlock, mothers age 18 who give birth to illegitimate children must live at home in order to receive aid — unless the mother marries the biological father or marries an individual who legally adopts the child. Mothers already receiving AFDC will not receive an increase in benefits if additional children are born out of wedlock. Finally, the bill requires mothers to establish paternity as a condition for receiving AFDC. Exceptions are provided for cases of rape and incest and if the state determines that efforts to establish paternity would result in physical danger to the mother.*

*The bill requires states to establish paternity in 90 percent of their cases. Also, states are encouraged to develop procedures in public hospitals and clinics to determine paternity and establish legal procedures that help pinpoint paternity in a reasonable time period.*

## ***An Analysis: Illegitimacy is Prosperity's Archenemy***

*Bina Patel, Research Assistant, University of Oklahoma College of Public Health  
Tulsa*

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When it comes to non-marital or illegitimate childbirths, recent trends suggest little at best in the way of progress for the state of Oklahoma.

While the nation saw some reduction in illegitimacy trends post welfare reform legislation of the mid-1990s, the same cannot be said true for Oklahoma's trends—which continued their same, undeterred path. If these negative trends continue unaddressed, as evident with Oklahoma, the implications for policy will remain boundless and the long-term outcomes for the state will remain unfavorable, forestalling progress in the state for many years to come.

### **Unmarried Mothers**

It's difficult to imagine that a non-marital childbirth could be sensible or even advantageous for an unmarried mother, let alone her newborn child. What's more detrimental and insensible is if the female is under 20 years of age—when the long-term effects of an out-of-wedlock birth can be especially severe. Young, unmarried mothers lack the resources and wherewithal necessary to provide an adequate upbringing for their child. The undue burden that's placed on a young mother and her child can adversely impact every realm of their lives—in the present and into the future.

In the immediacy, an illegitimate birth not only changes the tide for an unmarried female, but unfairly forces the newborn child into a potentially sub-standard living environment with few if any resources and a greatly diminished future potential. Problems are further compounded for both mother and child by the increased susceptibility to poverty and poor health, including mental, physical, social, psychological, and behavioral issues that are associated with these conditions. Some of the more obvious and serious “by-products” or effects of illegitimacy might also be evident in the high school drop-out rate, adult and child poverty

levels, health outcomes, drug abuse and violent crime standings, and the unemployment rate.

A young, unmarried female who gets pregnant might feel compelled to drop out of school before giving birth to her child; however, she's also precluded from any easy entry into the labor force due to a lack of adequate skills/education/training and as a new mother may not be so easily inclined to do so. As such, with income limitations and the need to sustain a living, the new mother is inevitably forced to rely on public assistance in order to support herself and her child. An out-of-wedlock childbirth, thus, by pre-empting the completion of schooling to graduation for a young mother, not only diminishes her future income potential as a wage-earner in the labor force, but inevitably induces her into receiving welfare or public assistance support. In the end, all these factors combined comprise a mother's inability to be an effective parent, as well as an independent, self-sufficient, and contributing member of society.

### **Out-of-Wedlock Children**

Children born out-of-wedlock are no better off than their mothers. For them, everything it seems is compounded or compromised. They are exposed to the same ills and environment as their mothers and are further predisposed to certain at-risk behaviors and conditions that arise from being raised in single-parent households. These children are thus at greater risk of falling into poverty, risky behavior, and diminished future potential. The problem of illegitimacy appears to be generational too in which it perpetuates itself from one generation to the next. Children who are born and raised in single-parent households are accustomed to the same behaviors and environment as their parent—one of limited means, a lack of education, poverty, poor health, and the potential for drug use and crime.

For illegitimate children, the risk of falling into poverty is great, which only further compromises a child's health and well-being, education, and future trajectory in life. Out-of-wedlock children are thrown into poverty and the absence of marriage increases the likelihood that a child will be poor; however, "marriage after an illegitimate birth is effective in cutting the child poverty rate in half."<sup>1</sup>

According to Rector, "both welfare dependence and single parenthood have significant deleterious effects on children's development, impeding their ability to become successful members of mainstream society."

He also says that:<sup>2</sup>

- *"Prolonged welfare dependence reduces children's IQ levels. Dependence also reduces a child's earnings in future years; the longer a child remains on [welfare] in childhood the lower will be his earnings as an adult. Being raised on welfare also increases the probability that a child will drop out of school and will be on welfare as an adult. Analysis shows that these effects are caused by welfare per se, not simply poverty; a poor child without welfare will do better than a similar poor child with welfare."*
- *"Out-of-wedlock childbearing and single parenthood are the principal causes of child poverty and welfare dependence in the U.S. Children raised in single parent families are more likely to: experience behavioral and emotional problems; suffer from physical abuse; engage in early sexual activity, and do poorly in school. Boys raised in single parent households are more likely to engage in crime; girls are more likely themselves to give birth outside of marriage. These effects are the result of the collapse of marriage per se rather than poverty; a poor child living with a mother and father united in marriage will do better than a similar poor child living in a single parent home."*

## **Trends & Data**

One year after the Welfare Reform Act of 1996 was enacted, there began a shift in the national trend in illegitimacy. The rate of out-of-wedlock births has slowed considerably in the nation since the passage of the 1996 legislation, however at the state level, the trend hasn't been as positive. Proportions of illegitimate births in the state continue to rise inexplicably, seemingly unaffected by the legislated limitations in welfare assistance. From a public policy standpoint, it appears that Oklahoma is undeterred by efforts to shift the negative trend in illegitimacy.

The data showed that in 2004 in the state of Oklahoma, almost 3 out of 4 (72%) black births, over half (52%) of all births to American Indians, 46% of Hispanic births, one-third (33%) of white births, and 16% of births to Asian/Pacific Islanders were illegitimate. The long-term trends show that from 1991 to 2004, the overall differential for all race/origin groups was an increase of over 11 percentage points—from 27.1 to 38.5%. The Hispanic population had the fastest growing proportion of illegitimate births in the state with an increase of about 17 percentage points. The white, American Indian, Asian/Pacific Islander, and black populations had differentials of about 13, 11, 5, and 3 percentage points, respectively.

The only upside to this problem is that although the black population maintains the highest proportion of illegitimate births of any race/origin in the state and nationally, they have had the slowest growth rate over time in illegitimate births compared to any other racial group.

## **Policy**

In 1996, Congress enacted the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) which replaced AFDC with TANF and had three legislative goals: 1) to reduce dependence; 2) to reduce child poverty; and 3) to reduce illegitimacy and strengthen marriage.<sup>3</sup>

Despite this legislation, Oklahoma still lags behind the nation in illegitimacy trends (see charts in previous article). There are a multitude of issues that are at the core of this problem that need to be considered and addressed by policy in order to effect change in overall trends. Some of these include teen sex, contraception use, drop-out rate, unemployment rate, poverty, health outcomes, cultural norms regarding childbearing, and ultimately the lack of formation of marriage unions or family structure prior to childbearing. Perhaps there are also multiple target populations to consider for policy—1) various race or ethnic groups at-risk, 2) young females at risk of pregnancy, 3) children born out-of-wedlock, and 4) fathers of these children.

A disintegration of the family unit or structure and the absence of marriage plays heavily into the trends and problems seen associated with illegitimacy. Couple that with other factors such as incomplete education, lack of work or income opportunities, and the necessary social and economic resources required to raise a child and the result is a dependence on welfare and a lack of self-sufficiency. Poor families perpetuate poor children and single-parent families are even more vulnerable to economic constraints.

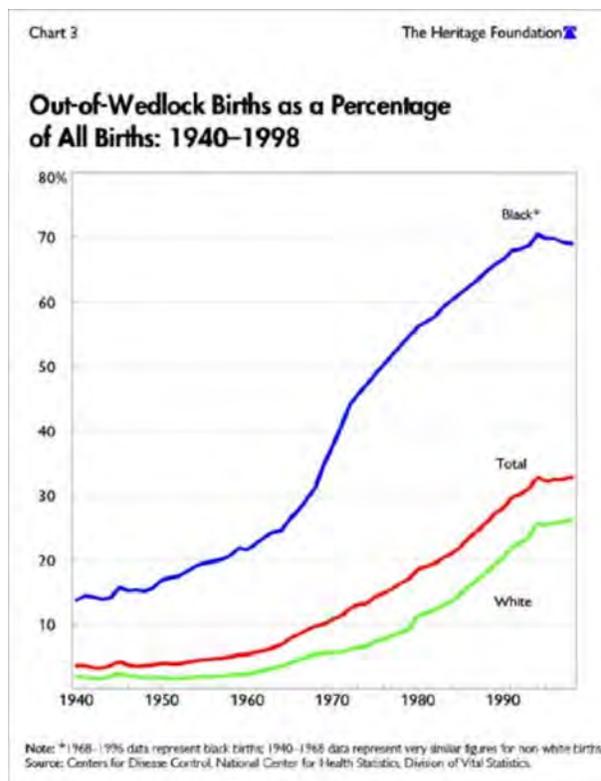
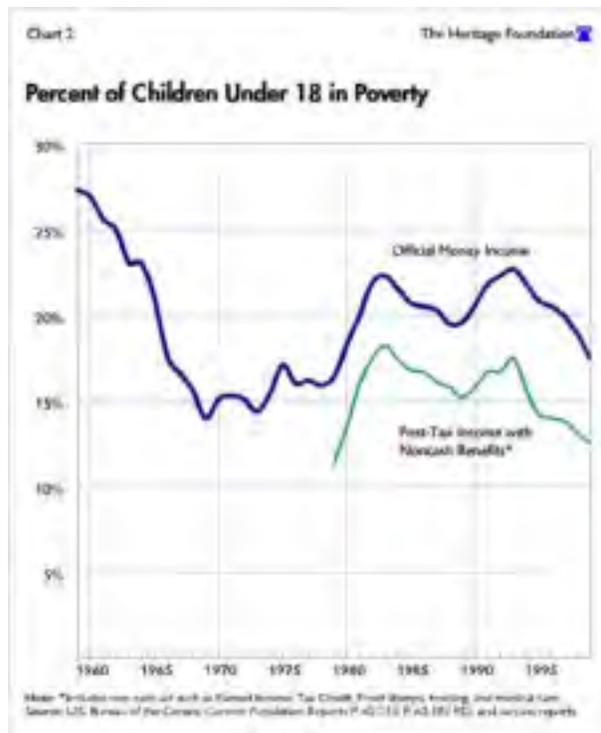
Cash assistance should be coupled with programs that support and encourage marriage and family planning, a commitment to completing education, and planning and staying in the workforce. Encouraging independence and self-sufficiency, parental responsibility, a departure from public assistance, the importance of marriage and family structure, and employment can all have a huge impact on out-of-wedlock births.

**Notes**

<sup>1</sup> Rector, Robert E. *The Effects of Welfare Reform*, The Heritage Foundation, March 2001, <http://www.heritage.org/Research/Welfare/Test031501b.cfm>

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*



## ***The African-American Presence in Oklahoma***

*Hannibal B. Johnson, Esq. Author, Attorney & Consultant  
Tulsa*

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*Hannibal B. Johnson, a Harvard Law School graduate, is an author, attorney, and consultant specializing in diversity issues, human relations, and non-profit management/governance. He has taught at The University of Tulsa College of Law, Oklahoma State University, and The University of Oklahoma. His books, Black Wall Street, Up From The Ashes, and Acres of Aspiration, chronicle the African-American experience in Oklahoma and its indelible impact on American history. His memoir, Mama Used to Say, is a motivational/inspirational tribute to motherhood. Johnson's latest book, No Place Like Home, is a middle reader set in the all-Black town of Boley, Oklahoma.*

### **Introduction**

African-Americans comprise a scant 7.6% of Oklahoma's population,<sup>1</sup> the largest concentrations of whom live in the state's two major metropolitan areas, Oklahoma City and Tulsa. Despite their relatively meager numbers, African-Americans have had a profound and indelible impact on the State of Oklahoma.

Seminal contributions and events include: (1) the formation of nationally recognized all-black towns such as Boley, Clearview, Langston, Rentiesville, and Taft; (2) the creation of "Black Wall Street," a successful, much-ballyhooed twentieth century African-American entrepreneurial community in Tulsa; (3) surviving America's worst domestic racial conflict, the 1921 Tulsa Race Riot; and (4) the nurturance of legendary jazz musicians and other artists. Oklahoma's destiny remains inextricably intertwined with the success or failure of her minority communities, the African-American community prominently among them.

African-Americans in Oklahoma face, in varying degrees, all of the ills that beset African-Americans throughout the United States<sup>2</sup>:

- (1) disproportionate high rates of violent crime<sup>3</sup>;
- (2) outsized rates of incarceration, particularly

among African-American males<sup>4</sup>; (3) disparities in the criminal justice system<sup>5</sup>; (4) drug abuse<sup>6</sup>; (5) lack of access to quality health care<sup>7</sup>; (6) the scourge of AIDS<sup>8</sup>; (7) poverty<sup>9</sup> and economic disparities, including income inequality<sup>10</sup>; (8) unacceptably high dropout rates for high school students<sup>11</sup>; (9) abysmal high school graduation rates<sup>12</sup>; and (10) comparatively low college graduation rates<sup>13</sup>.

Local, state, and federal governments, working together strategically with individuals, families, and communities may, over the long term, whittle away at these entrenched, systemic maladies. Ongoing dialogue, situational interventions, and strategic planning at the state level is necessary, though not sufficient, to address these concerns. Statistical metrics, readily available, should be monitored for progress on these fronts. To be sure, only a combination of increased individual responsibility and governmental accountability will turn the tide. That must be our hope.

African-Americans in Oklahoma, given a unique history, face other significant challenges that may be meaningfully impacted in the relative short term. Indeed, given leadership and adequate resources, these challenges may be transformed into significant opportunities.

African-Americans have been and will remain an integral and dynamic part of Oklahoma. As Oklahomans, our twenty-first century challenges with respect to African-Americans include: (1) acknowledging and coming to grips with a sometimes tortuous, painful past; (2) incorporating into our curricula inclusive and substantial treatment of significant historical milestones like the all-black town movement, the emergence of African-American entrepreneurship, 1921 Tulsa Race Riot, and African-American Oklahomans' musical and artistic contributions; (3) capitalizing

on the burgeoning “cultural tourism” industry by developing, marketing, and managing our historical assets; and (iv) understanding and appreciating diversity as Oklahoma demographics continue to evolve. Our rich past, given proper stewardship, holds the key to a successful future.

### **Our Roots:**

#### **Three Waves of Migration into Oklahoma**

African-American presence in Oklahoma dates back at least as far as the Sixteenth Century. African-Americans accompanied Spanish explorers to the area.

The second prominent influx of African-Americans into Oklahoma, centuries removed, came on the heels of the infamous “Trail of Tears,” the forced migration of Native American tribes from the southeastern United States to Indian Territory in eastern Oklahoma. African-Americans lived and worked among the displaced tribes, some as slaves, and others as tribal members. They, too, marched, suffered, and died en route to new lives in strange lands.

Still decades later, in 1879, the great African-American diaspora spilled out from the South to Kansas, other parts of the Midwest, and, ultimately, Oklahoma’s Twin Territories. That migration catalyzed a nationally known all-black town movement.<sup>14</sup>

### **Building Communities:**

#### **The All-Black Towns in Oklahoma**

African-American “Sooners” came to Oklahoma in the great land run of 1889. Edwin P. McCabe, a prominent Republican who served as Kansas state auditor from 1882 –1886, was one of Oklahoma’s early African-American Sooners.

McCabe urged high-powered Oklahoma and federal officials to consider Oklahoma Territory as the site of an all-black state. Federal legislation ensued. In 1890, McCabe visited with President Benjamin Harrison to press his case.

Ultimately, the all-black state initiative failed, and

McCabe set about the business of promoting all-black towns in Oklahoma. He founded Langston, created a townsite company, hired recruiting agents, and produced propaganda materials. Because of the efforts of McCabe and others, Oklahoma boasts more historically all-black towns than any other state, more than a dozen of which survive today.

Oklahoma became a state in 1907. In an act rife with irony, the inaugural legislature ensconced in law rigid “Jim Crow” mandates. One drop of Negro blood condemned its host to a steady stream of state-sanctioned oppression, hostility, and second-class citizenship. The Southern-style fear, intimidation, and discrimination so many African-Americans fled followed them to Oklahoma. They found their pastoral black Eden despoiled by the same racial hostility that infested the South.

Despite an auspicious beginning, the all-Black town movement crested between 1890 and 1910. The American economy shifted from agricultural to industrial during this period. This and a host of other social and economic factors ultimately sealed the fates of these unique, historic oases. Many perished. Most faded. Only the strong survived. The few that remain serve as testaments to the human spirit and monuments to the power of hope, faith, and community.

#### **A Bold Economic Vision: “Black Wall Street” & The 1921 Tulsa Race Riot**

Beyond the borders of the all-black towns, African-Americans created urban businesses in the burgeoning city of Tulsa in the early twentieth century—“Black Wall Street.” In “Deep Deuce,” the Second Street area in downtown Oklahoma City, African-Americans embraced jazz, and later, nurtured a fledgling civil rights movement. In other communities throughout the state, African-Americans made their presence known.

The story of Tulsa’s African-American community, to a greater extent than any other African-American community in the state, has captured the national imagination. A twin tale of tragedy and

triumph, the legacy of Black Wall Street is both a cautionary tale and an inspirational parable about the power of the human spirit.

In the early 1900s, remarkable entrepreneurial spirit brought Tulsa's history African-American community, known as "Greenwood," national renown. Greenwood—a town within a town—rested on the once firm foundation of segregation. Like its kin, the all-black towns, Greenwood thrived as African-Americans traded with one another, and as captive dollars circulated and re-circulated within the African-American community. "Negro Wall Street" (later, "Black Wall Street"), as some dubbed it, teemed with business activity. Greenwood Avenue, the vibrant hub of the area, drew favorable comparisons to Memphis' Beale Street and Chicago's State Street. Even statesman and educator Booker T. Washington raved about Greenwood.

The calamitous 1921 Tulsa Race Riot, the worst of the twentieth century "race riots" in American history, temporarily stilled Greenwood. In an orgy of violence, marauding, armed white rioters seized upon the teeming, prosperous community, leaving in their wake death and destruction.

Like the legendary phoenix, Greenwood rose from the ashes with renewed vitality and splendor, peaking in the 1940s. Decades later, changed social and economic conditions sparked a prodigious downward spiral from what had been a remarkable resurrection.

Community advocates assailed the skid of Greenwood from chic to shambles. The demolition of historic buildings in Greenwood, coupled with general neglect in the African-American community, led to a groundswell of support for cultural preservation. A drive emerged to preserve the rich legacy of the entrepreneurs who pioneered Greenwood and parlayed it into the vaunted "Black Wall Street." That led ultimately to modest revitalization and the construction of the Greenwood Cultural Center, a monument to the hopes, dreams, and aspirations of a risen community.

Spurred on by recommendations contained in the final report of the 1921 Tulsa Race Riot Commission (February 2001), a state-created fact-finding body convened in 1997, community leaders and state officials have begun planning for the John Hope Franklin Greenwood Reconciliation Museum and Memorial (the "Franklin Museum"). A site in the historic Greenwood District has been secured. Sculptures for the facility have been commissioned. The Franklin Museum will not only recount the inspirational Greenwood story, it will provide opportunities for racial reconciliation as well.<sup>15</sup>

Few of Oklahoma's all-black towns have been as fortunate as Tulsa's Greenwood in terms of capturing history for posterity. For many of the all-black towns, mere survival poses a constant challenge. Absent leadership, a significant infusion of resources, and appropriate attention to their needs, these cherished communities will likely falter, then fade unceremoniously into the sunset.

### **Conclusion**

Oklahoma's diversity has been and will continue to be her strength. The complexity of the tripartite African-American-White-Indian relationship created within Oklahoma a social, political, and economic tapestry unique among the states of the Union. Each group saw opportunity within the borders of the state. That said, each group perceived the others as real, substantial, and immediate threats. The same may be said of modern-day Oklahoma. Significant new demographic segments (*e.g.*, particularly Hispanics) lend further complexity, but also offer tremendous promise.

Visionary Oklahoma leaders need to recognize that our State is at its best when all of her citizens feel valued, respected, and treated fairly. Oklahoma cannot realize her full potential unless and until multiple viewpoints and perspectives borne of diversity are aired and considered.

African-Americans in Oklahoma face myriad challenges, from education to health care, poverty

to crime, education to economic issues. Many of these systemic, chronic issues will require the infusion of substantial time, talent, and treasure at all levels of government just to make incremental change. Other uniquely Oklahoma concerns, however, may be addressed in the relative short term.

Oklahoma's pioneering African-American forefathers and foremothers planted the trees under whose shade we now sit. They created for themselves and for us acres of aspiration. The value of their legacy to us—the likes of all-Black towns such as Boley, Clearview, Langston, Red Bird, Rentiesville, and Taft and their urban cousin, Tulsa's historic Greenwood—can no longer be ignored or underestimated.

Our failure to deal honestly with our history has left festering psychological wounds and a hemorrhage of trust. As an important part of the African-American struggle for freedom, justice, and equality, this rich history must be reclaimed, relished, and retold. Healing our history will require incursion into the sometimes-muddy waters of curricular reform—telling our real history in a way that gives us an understanding of the past, insight into the present, and hope for the future.

With that hope comes significant responsibility for our shared future. Managed properly, that responsibility will yield more than psychological and sociological benefits.

Cultural tourism offers tremendous potential for a history-rich state like Oklahoma. Already, individuals and groups from around the nation visit the historic Greenwood in Tulsa. Out-of-state tourists clamor for seats on the annual all-black towns bus tour originating from Rudisill Library in Tulsa each June.

If we invest in our history—in the all-black towns, in the Greenwood community—we then may go public proudly. Ultimately, we want to showcase

the universal message that the human spirit triumphs, even against seemingly insurmountable odds.

Earlier this year, the Oklahoma Legislature passed Senate Concurrent Resolution No. 42, which urges restoration of the all-black towns through the “Let Us Rise Up and Build” program and OneNet technology. OneNet, a statewide telecommunications and information network begun in 1996, links the government and education sectors through Internet technology. The resolution, backed by a gubernatorial allocation of some \$177,000, eyes OneNet linkage as a spur to infrastructure development and, in turn, economic growth, in the all-black towns.

Investment in the remaining all-black towns and in a rejuvenated Greenwood in Tulsa is susceptible to objective measurement longitudinally. Likewise, curriculum enhancements that address concerns over inclusion may easily be tracked. Either we create and utilize a statewide curriculum that includes full and fair treatment of the African-American experience in Oklahoma or we do not.

Unlike most of the pernicious problems plaguing the African-American community as a whole, these uniquely Oklahoma concerns may be ameliorated over the short term, and impacted almost immediately. Statewide networks like the Oklahoma Academy for State Goals could take leadership in terms of bringing together the people and marshalling the resources necessary to effect these changes. All Oklahomans would benefit.

With visionary leadership from both within and without, the state of the African-American community in Oklahoma may be vastly improved.

Such leadership, coupled with critical, strategic thinking, could catapult not just the African-American community, but also other Oklahomans, into an unparalleled social and economic health.

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- <sup>13</sup> The six-year graduation rate for African-American college students at four-year institutions is 40.5% (compared to 48.3% for whites). The three-year graduation rate for African-American community college students is 12.3% (compared to 19.6% for whites). E-mail from Laura Tyree, Director of Research and Analysis/State IPEDS Coordinator, Strategic Planning and Analysis, Oklahoma State Regents for Higher Education, to Hannibal B. Johnson, Author, Attorney & Consultant (May 31, 2006, 10:15:22 CST) (on file with author). African-Americans constituted 8.3% of the enrollment in public and private higher educational institutions in Oklahoma in 2001. *Oklahoma State Regents for Higher Education Student Data Report 2002 – 03*, <http://www.okhighered.org/studies-reports/student-data/2002-2003/section1.pdf>
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## ***Can We Capitalize On Growth in the Hispanic Community?***

*Ed Martinez, Jr, Owner/Agent, Ed Martinez State Farm Agency Inc.  
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### *Editor Comment*

*Mr. Martinez is a Tulsa community leader who serves as the Board Chairman of Oklahoma's newest Federally Qualified Health Center (FQHC), Community Health Connections. The Center is focused upon population health services for Tulsa's Hispanic population and other underserved citizens.*

### **Historical Perspective**

The Hispanic presence in Oklahoma had been negligible until 1990. This lack of familiarity caused by the few number of Hispanic has been one of the reasons that the recent significant increase in the number of Hispanics in Oklahoma has caused an emotional reaction (exemplified the anti-immigration rallies supported by the group called the Minutemen).

Since the general population has not know or worked with Hispanics prior to today, there appears to be a natural fear of the unknown. One of

the challenges we have today, is to better integrate Hispanics into our culture. And because many are here in a questionably undocumented status, they are a part of the shadow community and economy that has caused and will continue to cause significant political and legal challenges.

The earliest recorded population counts listed Hispanics as .2 of the population as of the mid 1940's census sample. Several historical events minimally added to those numbers. Tulsa as a rail hub attracted some of the Hispanic rail workers to settle in Tulsa. Many Hispanics that trained with Spartan Aeronautics for World War II, and likewise returned after the war to live here and worked for the aviation industry.

And beginning in 1962, Tulsa absorbed many Cuban refugees that relocated out of Cuba in 3 immigration waves; in the early 1960s when the first group left as Fidel Castro took power, the early 1970s and in 1986 when many from the



Mariel Boatlift chose to relocate to Tulsa. These efforts were led by church groups that initially placed refugees in their homes and supported them economically and otherwise until they got on their feet. (Tulsa again stepped forward in 1976 to embrace a large number of Viet Nameese refugees, taking them into their homes and offering them employment and kindness).

Oklahoma's Christian Church community can take great pride at leading these efforts as both of these migrations have produced several generations of successful citizens).

But the largest and most significant surge of Hispanic immigration occurred in 1998 when an influx of Mexicans primarily from the Mexican State of Zacatecas, began to settle in the Tulsa, attracted by the strong housing and commercial construction boom. More resettled from California, as friends and relatives related the told them of the inexpensive cost of living and the peaceful lifestyle in Tulsa.

In the 1990 census, Oklahoma reported 2.7% of the population as Hispanic. My own recollection of my arrival to Tulsa in 1995 was reading the Tulsa Chamber of Commerce Census report that 2 % of the Tulsa population was Hispanic. When we arrived, we did not have a local place to purchase the staples required of daily life. We had no place locally to buy fresh corn tortillas, cooking spices, nor Chorizo (a Mexican breakfast sausage), let alone hojas or masa for tamales. I would take my family to Dallas to purchase these staples in bulk, for our own use about once a month.

I started my business in Tulsa in 1997. I recalled a very good friend, one who had been born and raised in the Tulsa/ Broken Arrow area, advising me that I might not want to open an office in Tulsa, as it had the reputation for being "redneck" and might not welcome a Hispanic businessman. As I had served as an officer in the U.S. Army for over 20 years, the idea of being one of a few or one of the only was not new to me. Consulting with my family, we decided that we did not want to open a

start a business anywhere other than in Tulsa. I made the decision to stake my future in Tulsa.

In 1998, about a year after I started my business, I began to notice the familiar singsong sounds of people speaking Spanish at Woodland Hills Mall. I wondered what these Mexican tourist were doing visiting Oklahoma. As I became more aware of the presence of Hispanics all over Oklahoma, I began to notice more and more Hispanics in a variety of industries and economic sectors. The Tulsa World published a series in 1998 describing the influx of over 5000 families to the Tulsa area. Hispanics have entered the Oklahoma economy in the construction, service and food service sectors.

### **The Situation Today**

The 2000 census reported that the number of Hispanics in Tulsa had grown to 5.2% of the Oklahoma population. This number of course represents the number of legal residents in Oklahoma. No one knows the number of undocumented people in Oklahoma. That number has been estimated to be another 5% of the population, making the documented and undocumented number to be closer to 10% of the Oklahoma population.

Hispanics employees, documented and undocumented are working in every sector of the Oklahoma economy. Hispanics, documented and undocumented cook and serve at the most elite Oklahoma establishments. At many if not most construction sites whether they are residential or commercial, Hispanic skilled tradesmen pound nails and pour concrete,

The complexion of today's domestic help has lightened significantly. The first prompt almost every ATM in any bank in Oklahoma asks if you want to transact business in English or Spanish. Several Oklahoma elementary schools report over 50% Hispanic enrollment. Even in rural areas like Heavener, Pryor and Guymon have significant Hispanic growth.

## **Immigration Reform?**

Today as I write this essay, the national debate on immigration reform continues. There is a chasm between those that want a comprehensive reform package and those that want only enforcement of the immigration laws. Where the debate will end is beyond the scope of this paper, but the results, whatever they are, will significantly impact Oklahoma in the near term and for the foreseeable future.

If a comprehensive reform is chosen, Oklahoma will be faced with the prospect of assimilating a number of undocumented people that is about the same as the number of documented citizens already on the rolls. An indicator of what the impact of this debate is to high school aged children is reflected in the high school graduation rates for Hispanics- currently they are 53% in Oklahoma and 56% nationally. If the “enforce only” argument wins, we will be in the mist of finding and assisting with the relocation of up to half a million undocumented workers in Oklahoma. Enforcement will have to be integrated into the functions of the law enforcement community.

Those that have American citizen children will need help in finding state facilities or friendly families to take the children in as foster children while the parents are deported back to the country of origin. And inevitably there will be in-betweeners in the process of receiving documents or in the legal system fighting to stay with their families. Assimilation

## **Assimilation and Language**

A subject much discussed in the immigration reform dialog is assimilation and language. Clearly this country and this state will never really be a multilingual state as many of the world class cities of the world have been. And on its own, Adam Smith “invisible hand” of the marketplace has already determined that English is the language of the U S dollar. I have advised many of my clients that they do not have to learn how to speak English to live and get along in Oklahoma. But that if they ever expect to purchase a car, or a home they will

be subject to the possibility of being taken advantage of, if they do not learn the language.

If they do not know the language, they are subject to the exploitation of those that will take advantage of them because of their ignorance. And this fact alone will be the impetus for learning English as quickly as possible.

The Tulsa Hispanic Chamber of Commerce partnered with Tulsa Technology Centers and sponsored English as a Second Language classes at the Chamber offices. These classes were so successful they had to be moved to the Lemly campus to accommodate the number of students wanting to take English classes. What I have learned is that when afforded the opportunity Hispanic immigrants legal and otherwise, will take classes to learn English, even if it is after hours, even if they have to pay for the classes.

By the same token Adam Smith’s hand has also determined that anyone that wants to transact business with the Hispanic immigrant community must add in language capability, and possibly recognize that there are some bicultural considerations in doing business with Hispanics.

While I believe that the in-language capability will be a short term obstacle, I think we have a unique opportunity to become that international city if we would only seriously evaluate our high school language instruction. Many of us took the high school Spanish but cannot recall much of the instruction. Yet kids that have been taught in the immersion programs such as Eisenhower School in Tulsa not only recall language, but many go on to further use it in their educational and professional careers. If we look at the European model of language, where students must achieve language proficiency in at least two languages, we can quickly see the benefit of all of us speaking at least two languages. First we would have the beginnings of a truly bilingual community, and that could open many international doors for us.

But when discussing assimilation, we need to understand these basic facts. Most of the undocumented immigrants that travel to Oklahoma

are single males. Most come with the intention to work in the U.S. legally or otherwise, for a period of time with plans to return to Mexico or their country of origin, to live off their savings. They make trips back to Mexico to keep the dream alive.

However, in many cases, those undocumented workers that come to Oklahoma to work, become smitten by love, and get married, to some local women or another undocumented person, and have children. These children are by U.S. Constitution, American citizens. And after time, these dreams are often dashed when they realize that their kids recognize America as home, and can never imagine leaving a place like Oklahoma for a place like Mexico. As these children grow into adulthood, marry and have children in the U.S. as

***Today we graduate 53% of Hispanic students. This is criminal. We need to mobilize all of our resources to educate our parents, motivate our students and empower our teachers to attack this significant societal problem.***

well, those dreams of returning to Mexico are washed away like the waters that flow downstream the Rio Bravo.

We note that the infant birth rates are significantly higher in the Hispanic community than in the mainstream birth rates. These children are raised on American television and McDonalds. While they do quickly learn English, they maintain their Spanish. They learn English while watching Sponge Bob Squarepants and MTV. While the parents will speak Spanish at home exclusively, the kids will be truly bilingual and bicultural.

It is this bicultural attitude that begins to tie their allegiance exclusively to the United States. Unfortunately, for the parents, their dream of returning to Mexico after raising a nest egg in America, the Land of Opportunity, is often lost as the reality of keeping family together remains a foremost value to them.

So the seeds of assimilation are in recognizing how important the concept of educating the children of immigrants and making sure that they have a doorway to higher education or technical schools and therefore, the ability to enter a life changing profession. Clearly education is the engine of change.

### **The Vision**

Let's assume for the purpose of this essay, that the immigration patterns started in 1998 will continue well into the year 2030. The Oklahoma Office of Commerce is estimating that by the year 2025, we will have a total state population of 3,871,500, with 240,200 of those categorized as Hispanics or about 6.1% of the population. In my opinion that estimate is significantly lower than other source estimates, by at least 4%. I think we will have to take a more realistic estimate to adequately plan for 2030. Studies by several marketing firms project that Oklahoma Hispanics will compose 15% to 20% of the population.

Oklahoma has at least three times in our short history accommodated small numbers of immigrants. These immigrants have assimilated into the mainstream successfully, while maintaining their cultural identity. As a state, at least in the private sector, we understand what it takes to integrate small groups of immigrants. But the first piece of the solution is to integrate, not isolate the Hispanic groups as they are growing.

But the issue will be if we receive the number of immigrants we anticipate, our governmental organizations will need to organize and to energize support activities to build infrastructures that can physically absorb this number of people. The process needs to start with exceptional demographic planning by our public school boards. Good schools will attract and create good safe neighborhoods.

Our schools are the key to the fundamental changes we will need to effect. We will need to determine settlement patterns and plan schools to accommodate these Hispanic students. These schools will need to be neighborhood centers much like many are now, with capacity to provide

education and social service information to parents of these kids. Social services could include the entire spectrum of services without inefficient duplication. This could be consumer information as well as voter registration and adult education. At least transitionally I think we need to be prepared to keep bilingual education if there is a need, not as a crutch, but to facilitate the educational process and speed up the language transition.

Neighborhood development needs to encompass not only the residential, but allow for the commercial development possibilities as Hispanics culturally have a higher propensity to own businesses. The business incubation infrastructure will need to be present so that we can enhance the success of these businesses. Something very similar to the Tulsa and State Hispanic Chamber's Small Business Academy will sufficiently prepare new Hispanic business owners to do business in Oklahoma.

One of the assimilation challenges is the fact that Hispanic kids can easily become victims of the television culture and fall prey to the influence of the gang culture as well. Again working with service organizations with similar success ideas can integrate the children to offer positive alternatives to other than school activities. Church groups, Boys and Girl Scouts, Urban Leagues and other similar organizations can be encouraged to partner with church and schools in the area to offer positive after school activities that have traditionally been the difference between success and failure in the adolescent community. The challenge has been to offer the services without inefficient duplication by locating and partnering these programs with schools and faith based programs that already have brick and mortar locations in the neighborhoods. And other community service organizations like can be encouraged to locate in these areas to serve these emerging Hispanic communities and address after school activities as positive alternatives to neighborhood gangs.

Healthcare issues may be resolved by the current immigration reforms debate and resulting conference committee agreements. If the status quo remains, we can continue to expand the indigent

care provided by the Federally Qualified Health Clinics like the Community Health Connection. The Community Health Connection has a business model that will allow for continue to expand the model of the Federally Qualified Health Clinics like the Community Health Connection.

So what can we, as a state and as the citizens of a state, do to prepare for this population growth is to work individually and within our church communities to absorb and embrace the immigrant groupings. I think well financed either privately or with allocated public funds, faith based programs are more efficient in supporting the newly arriving immigrant and integrating them into the base (in comparison to a state or federal agency). As a state and local government, we need to allocate the assets to prepare the infrastructure to absorb this growth. Based on current demographic trends we can expect that the current Hispanic growth areas will continue to grow. The challenge will remain how: can we predict the next Guymon. The idea is to have a semblance of an infrastructure at each growth area. Private industry will have to work with governmental agencies as these hot spots are developed, to report increases in numbers or arriving workers. Governmental agencies will have to be agile enough to quickly develop the require support and infrastructure to allow the growth to occur in a positive manner.

### **The Recommended Metric**

As we have alluded, our schools will be the first to report growth. In the same manner, schools can tell us the projected needs. A metric that will be important to determine future societal needs and governmental budgetary needs will be the high school graduation rates. We must work to keep kids in school, focused on post secondary educational opportunities. Today we graduate 53% of Hispanic students. This is criminal. We need to mobilize all of our resources to educate our parents, motivate our students and empower our teachers to attack this significant societal problem. When we graduate all of our high school graduates and challenge them to pursue and take advantage of post secondary opportunities, we will indeed prepare ourselves to capitalize on the growth in the Hispanic population, and facilitate their ability to contribute significantly in the year 2030.

## ***Catholic Charities in Oklahoma***

*Tim O'Connor, Catholic Charities  
Archdiocese of Oklahoma City*

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Catholic Charities of Oklahoma marks its beginning in 1910. Bishop Theophile Meerschart purchased land in Bethany to establish an orphanage for children who could not be raised by family due to separation, abandonment, deprivation or death. St. Joseph's Orphanage opened in 1912, providing thousands of Oklahoma children a home with the opportunity for education and support as they grew to be young adults. The social mission of the Church *to feed the hungry, clothe the naked, welcome the stranger, visit the imprisoned and care for the sick and dying* has been expressed in the services of Catholic Charities in Oklahoma for nearly 100 years.



to understand our own vulnerability and dependence on others. When we personally take on the day-to-day struggles of someone who is desperate for help, we begin to appreciate the wealth and talents we have been given.

Consider the tragedies that have brought national attention to Oklahoma in recent times: the Murrah Building bombing in 1995 and the F5 tornados in 1999. People all over the world were moved by the personal stories and images of victims who suffered devastation. Our community was overwhelmed handling the outpouring of love and support from people we would never meet, but who needed to express their concern for those most affected. This experience taught us that our need to make a difference in the life of another person motivates the giving of self. In every tragedy, people want to be linked to those most in need.

Today, Catholic Charities is a major private provider of social services to children, families and individuals in Oklahoma. It works alongside public and private organizations to insure the basic needs of those who have the least are met. The organization also advocates for public policy that promotes the common good on behalf of those whose voices are not heard.

We need not rely on national disasters to remind us of our inherent duty to serve others. We need not try to convince ourselves that a Christmas basket left on a porch is the answer to a safety net. Through stewardship of talent, time and money in our neighborhoods and communities everyone is needed to build community that is inclusive and supportive for all. Would there be a need for a homeless shelter if every local church sponsored one family until they were back on their feet.

Every generation must confront the face of poverty and work to mitigate its effects in society. Nationally, as well as locally, solutions for serving the poor have moved from institutional to community-based settings. Orphanages, asylums and homes for the poor have disappeared from our landscape. Today, communities bear the major responsibility to provide solutions, opportunities and treatment for those needing protection and security. Maintaining the dignity of all persons, regardless of his or her human condition is the foundation of all religions.

The most effective solutions to poverty are in the hands of local community leaders who are inspired and motivated to set an example of service and generosity that will persuade others to be a part of the solution. Strong voluntary donations and service enable organizations like Catholic Charities to be responsive and accountable in making sure that not child goes to be hungry and no one dies in the cold. Ultimately we learn that those whom we serve bring out the best in us.

If we defer our obligation of feeding the hungry or welcoming the stranger to government (or any institution), the face of poverty becomes anonymous. We lose sight of the human condition that unites us with all people of the world. We fail

## ***Ending Homelessness in Oklahoma City?***

*Jane Ferrill  
City of Oklahoma City*

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The social service needs of the community include issues beyond homelessness to include the elderly, disabled (physical, mental, substance abuse) and youth populations. The resources needed to address all of these needs are not readily available. The largest focus of federal dollars has been directed toward ending homelessness.

Oklahoma City began struggling with the issues surrounding homelessness more than a decade ago. During the '70's, the successes of the oil industry and agriculture masked the growing population who were becoming homeless. During the last three decades, the number of people on the street has steadily increased to a level requiring a strategic plan of action. Also, during this time, a large number of agencies (public, private and faith based) have created their own programs to serve the homeless population.

In the mid '90's, the Department of Housing and Urban Development created the Continuum of Care program aimed toward addressing the needs of the homeless population. Oklahoma City was successful in obtaining these funds and began to create a committee focused on meeting the challenges of continued success in grant funding while beginning to comprehensively address the needs of the ever-growing homeless population. The committee widened its focus to be more strategic with funding decisions by combining the proposal process to include the four different funding sources available. The committee also expanded to include stakeholders from the public, private and non-profit sectors with the expertise and goal of working to end homelessness.

In 2002, the President called for an initiative to end chronic homelessness in this country in 10 years. As a result, more than 200 local jurisdictions have adopted "10 Year Plans". Oklahoma City adopted "Homes for the Homeless – a 10 Year Plan to Create Lasting Solutions" in July, 2004. Chronic homelessness is generally defined as persons who have lived on the streets for more

than a year or had several instances of returning to the streets and also have a disabling condition (physical, mental, substance abuse).

The 10 Year Plan was research driven, performance based and results oriented. Each year since it's adoption, the plan has been reviewed and updated with accomplishments noted.

The 10 Year Plan Committee formed through the Coalition for the Needy has focused its' efforts on developing the following four key steps to ending homelessness:

### **Plan for Outcomes/Manage for Results**

- Focus on increasing knowledge of chronically homeless individuals and families and improving tracking capacity
- Increase problem solving by further building networking relationships among providers, funders, planners and advocates
- Fully implement HMIS (Homeless Management Information System)
- Initiate performance-based funding focusing on measurable outcomes
- Develop minimum standards for housing facilities, operations and staffing
- Implement an anti-stigma campaign to solicit City-wide support

### **Close the Front Door: Preventing Homelessness**

- Improve access to services (mental health, substance abuse, primary health care)
- Improve coordination with State agency programs to reduce referrals/discharge to shelters

- Improve housing support services to formerly homeless persons living in permanent housing
- Coordinate prevention programs to assist persons at-risk of becoming homeless including increasing and stabilizing funding
- Work with the Public Housing Authority to create policies to assist the homeless and chronically homeless populations to obtain and maintain affordable housing

### **Open the Back Door Out of Homelessness**

- Increase the supply of permanent supportive housing for homeless persons with disabilities
- Strengthen the transitional housing programs
- Improve access to public housing and Section 8
- Expedite benefits enrollment in mainstream programs
- Promote and adopt a Housing First strategy
- Increase employment and educational opportunities for homeless persons
- Promote the use of Good Neighbor Agreements

### **Build the Infrastructure**

- Increase or utilize the supply of affordable housing
- Seek new ways to leverage, coordinate, increase and diversify funding for housing and homeless programs
- Increase public and community support for the plan to end homelessness (including chronic homelessness)
- Develop a mechanism for centralized intake of homeless people
- Develop an engagement and outreach program to reach chronically homeless persons who have been traditionally underserved

All of these steps were undertaken simultaneously and are re-evaluated on an annual basis to maintain momentum and make adjustments. Reducing homelessness and particularly chronic homelessness requires serious, focused, ongoing coordination between all the service providers and funding sources.



Oklahoma City has been undertaking an extensive revitalization of the downtown area with public tax dollar support. The changes already evident have caused increasing attention to be focused on street homelessness in that area. Now is the time to address the needs of the growing population of homeless individuals and families by creating real and lasting solutions.

Since the adoption of the 10 Year Plan, we have made significant progress in reaching four of the major goals – 1) new units of housing, 2) one-stop resource center, 3) improved transportation, and 4) homeless management information system (HMIS) database. We have:

- Added 26 new units of permanent supportive housing.
- Purchased property for the WestTown Resource Center to create a centralized one-stop service center to provide access to employment and resources for homeless and low-income individuals and families.
- Seen a 10% decrease in the number of people staying in emergency shelters (since 2004).
- Provided additional funding for bus and taxi service vouchers.
- Initiated a pilot program for transit service specific to the homeless population – 4 new daily routes were added to provide no-cost transportation from the shelters to service providers.

- Increased participation by provider agencies and shelters in the HMIS system, which will assist in the coordination of services and improve data collection of homeless persons. Since March 2005, HMIS participation has increased to 100% of agencies funded by government grants.
- Created a “Shelter Check” system, integrated with HMIS, to aid our emergency shelters in the daily check-in process.
- Implemented “Real Change” voucher program to reduce street panhandling and connect people in need of resources to the emergency shelters.
- Conducted SOAR training for physicians and case managers to improve access to Social Security/Disability Benefits.

Oklahoma City, in cooperation with the Homeless Alliance and the Coalition of the Needy, conducts an annual one-day “Point-In-Time” count of the homeless population. The information gained from this effort guides the planning process as well as identifies areas of needed improvement. The Point-in-Time Count found a total of 1555 homeless persons on the night of January 19, 2006. This number included people identified as homeless in emergency shelters, transitional housing facilities, crisis facilities, and street locations, as well as those accessing service agencies who did not report sleeping in one of the counting locations. Only 40% of the homeless were staying in emergency shelters, and over one-fourth were staying on the streets or in encampments.

<i>Type</i>	<i>No.</i>	<i>Pct</i>
<i>Emergency Shelters</i>	<i>627</i>	<i>40%</i>
<i>Transitional Housing</i>	<i>490</i>	<i>32%</i>
<i>Crisis Facilities</i>	<i>22</i>	<i>1%</i>
<i>Streets and Other</i>	<i>416</i>	<i>27%</i>
<i>Total</i>	<i>1,555</i>	<i>100%</i>

A deeper look at the data from the Point in Time count shows that Oklahoma City is on the right track with an increased focus on services for the homeless. The Homeless Alliance has worked to

increase collaboration among service providers, especially the emergency homeless shelters. Oklahoma City has also seen an increase in the number of units of permanent supportive housing, which has been identified nationally as one of the most effective means of reducing the number of people experiencing homelessness. Data from the Point in Time count confirm that people who are getting access to services are showing improvement.

The data from this count also show that, even though the people who receive help are showing improvement, there are more people who are not accessing services than previously thought. Most people in this group are not staying in emergency shelters or transitional housing, and Oklahoma City lacks sufficient data on this group to draw conclusions about them.

The large number of people who are living unsheltered points toward a need for more permanent supportive housing and a “housing first” approach, which has been very successful in other cities. Chronically homeless people who have the opportunity to live in permanent supportive housing are more likely to voluntarily seek treatment for substance abuse and mental health issues, as well as move into independent living. Not only is permanent supportive housing a more caring way of dealing with the homeless, it is also cost-effective. It has been shown that it costs essentially the same amount to provide a chronically homeless person with housing and comprehensive services as it does to leave him or her homeless and moving through shelters, treatment facilities, correctional facilities, emergency departments, and the myriad other public services frequented by the chronically homeless.

Oklahoma City also provides funding for social services not specifically targeted to serving the homeless population. These services include a Gatekeeper Program to identify aging residents that may need services; the 2-1-1 call service (2-1-1 is to Social Services what 9-1-1 is to Emergency Services); emergency shelter for Senior Citizens and medically needy; food pantry; and life skills training for persons with HIV/AIDS.

## ***Building Skyscrapers in the Sand***

*Anne M. Roberts, Executive Director, Oklahoma Institute for Child Advocacy  
Oklahoma City*

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*A highly skilled, strong, competitive workforce that is actively engaged in civic participation is the most critical factor in obtaining and sustaining a high quality of life for our state. Without question, effective early childhood education will be the engine that propels Oklahoma most rapidly in this direction. Governor's Task Force on Early Childhood Education, March 2001.*

### **If you don't get childhood right, it's hard to get adulthood right.**

This is such a simple concept, yet so difficult to understand and act upon. Oklahomans love their children deeply, as can be evidenced by the myriad of parents and volunteers at ballparks and dance recitals. Yet Oklahoma consistently ranks poorly in all the indicators of child health, education and well-being:

- Twenty percent of our children - over 170,000 - suffer the effects of poverty, including poor access to a nutritious diet, adequate health care, and stable housing.
- More than 13,000 Oklahoma children suffer abuse at the hands of their own parents, putting them at risk for delayed development and physical or emotional impairments.
- Over 100,000 Oklahoma children live in single-parent households, either from our skyrocketing divorce rate, or from being born to a single mother. Young children in single-parent households are five times more likely to live in poverty than those in a two-parent home.

### **Young Children and Oklahoma's Future**

Couple these findings with demographic forecasts and it becomes very clear that today's children -

ready or not - will bear an increasing burden of care for their elders. The two fastest growing segments of our population are the elderly, who may certainly live into their 90s, and children from poor families. Projections indicate that as the baby boomers retire, fewer skilled workers will be fueling the economy, and creating the tax base to help support them. If we want to ensure a highly skilled workforce to create and sustain a flourishing economy, Oklahoma will need all our workers to be at the top of their game.

But what does this really mean? How can Oklahoma improve the potential social and educational outcomes for our children to ensure that every child meets our expectations, and is prepared to take on the mantle of responsibility?

The answer lies in a renewed focus on the vital timeframe of a child's life when the most critically important development is taking place: birth to age five. This focus must take into account the single most powerful factor that can rob the potential of young children and their ability to be productive and competitive for Oklahoma's future: poverty.



For the last two decades, scientific discovery has affirmed what parents have known for centuries – that the first years of life are crucial to all future development. Every baby is born with over 100 billion neurons – surely enough to become a rocket scientist. But what determines a child’s future is not so much the number of neurons, but the connections they make with each other – which are almost entirely due to the effects of experience. Infants deprived of certain enriching relationships, experiences and interactions risk losing essential neural connections that may hinder the proper development of their brains.

Consider this.

When we build a skyscraper, we dig deep and prepare a solid foundation with the capacity to hold the structure above it. Failure to attend to the foundation would be folly and lead to the inevitable collapse of the building. In the same way, early childhood experiences contribute to the architecture of a child’s brain, cementing the foundation on which to build future educational experiences, relationships, and capabilities.

### **The Architecture of the Growing Brain**

Research has discovered certain specific things that help or hinder the growth of brain architecture. What helps are positive and repeated interactions with attentive adults. What hinders is frequent stress – whether from physical discomfort, fear, or interactions with a stressed-out parent. Stress releases toxic chemicals in the brain, which corrode and weaken its ability to build itself properly. It is no wonder, then, that children who live with poverty or family instability are at higher risk for school failure or underachievement.

So what can we do? How can we relieve the stress on disadvantaged families and help their children, and Oklahoma, thrive?

Consider two strategies: reducing the *effects* of childhood poverty and attacking child poverty *directly*.

### **Reducing the Effects of Poverty**

The impact of poverty on young children can be devastating. The National Center for Children in Poverty reports that poor children face a greater likelihood of impaired development because of the increased exposure to a number of factors associated with poverty, including:

- Inadequate nutrition
- Environmental toxins
- Maternal depression
- Trauma and abuse
- Lower quality of childcare
- Parental substance abuse

Addressing these risk factors for young children and their families must be a priority for Oklahoma if we are to meet the challenges of our developing economy. Numerous programs are already in place in Oklahoma to address these needs, but current funding levels and inadequate state policies across the board hamper their effectiveness. For example, nearly 38,000 Oklahoma women are in need of substance abuse treatment, and almost 3,000 of them are pregnant. Yet our capacity for providing drug treatment is limited to fewer than 250 beds. Likewise, child abuse killed a record 51 Oklahoma children last year, yet state funding for child abuse prevention programs was slashed in the economic downturn of 2002, and has yet to recover.

### **Reducing Childhood Poverty**

According to *The Future of Children*, published by Princeton University and the Brookings Institution, a number of demographic and economic changes are influencing the trends contributing to the poverty of young children:

#### Factors INCREASING Child Poverty

Increases in families headed by single females  
Increases in ethnic and racial diversity  
Stalled economic growth  
Increases in babies born to teen mothers

#### Factors DECREASING Child Poverty

Decreases in family size  
Increases in parental education  
Increases in two-income families

Oklahoma has taken a number of steps to address these factors.

The Department of Human Services has successfully increased child support payments from non-custodial parents; the Oklahoma Health Care Authority has made family planning services available to low-income families; the Oklahoma Higher Learning Access Program is making college tuition affordable for thousands of Oklahoma students.

Yet almost 40% of all babies born in Oklahoma are out-of-wedlock, and 20,000 marriages end in divorce – leaving over 100,000 young children open to the multiple risk factors associated with poverty. Oklahoma ranks 8<sup>th</sup> highest in the nation for births to teens aged 15 to 19, cutting short the educational careers of young mothers and their opportunities to learn marketable skills.

Mobility rates curtail the supportive relationships of extended families, leaving young families isolated and in need of a support system to help them through difficult times with their infants.

### **Conclusion**

At the very sensitive time in a baby's life when the brain is being constructed, Oklahoma must do more to ensure that each child has access to the variety of factors that interact to promote healthy intellectual, social and emotion development. This means strengthening their families through education and support, continuing to increase the quality of out-of-home care, and increasing the earning potential of single mothers.

By ignoring these opportunities to mitigate the effects of poverty and family instability, Oklahoma is building a skyscraper in the sand.

## ***EC in Illinois***

*Craig Knutson. Research Coordinator*

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On a recent trip to Chicago, I spent part of my morning reading the Chicago Tribune Magazine. One article, entitled “Sandbox Cum Laude,” caught my eye and made me realize the importance of LONG-TERM thinking and investment. The article highlighted the importance of **leadership** (Illinois Governor Rod Blagojevich, and others), **quality curriculum**, and **investment** in the area of early childhood education. It is the story about how a new state law promises free pre-school to ALL kids and the anticipated hurdles the state will likely face. It is the type of BOLD leadership and across-the-board collaboration that is critical.

*Preschool for All*, the Illinois initiative that took effect July 1 of this year, made Illinois the FIRST state in the U.S. to promise free pre-kindergarten to virtually every 3- and 4-year old whose parents want it! The Illinois plan requires that teachers have college degrees and “sets forth a well-crafted curriculum that focuses on how children develop emotionally and socially, as well as whether they are learning to read and count.” The article cites the well-documented benefits of why this investment is so critical: higher school performance, greater productivity, and reduced criminality.

But it has a parallel focus on the children and the primary conduit of change”— qualified teachers. The combination should deliver positive outcomes for their respective lifetimes. And the Governor's commitment was based upon “something you learn in Sunday School, “try to do for all Illinois families what you do for your family.” His daughter's experiences and outcomes going through a Montessori preschool convinced him (and his wife) that this had to be done.

The road to success was not easy: “The governor has no intentions of ever funding this. This is a governor with policy attention-deficit disorder,” so stated a prominent State Senator. Unfortunately, that rhetoric sounds much like the mud slinging we've been hearing in Oklahoma recently. The Illinois blueprint for this initiative is available; with all the successes this State has achieved in early childhood, especially with the Kaiser and Inasmuch Foundations backing, all we lack is some “leadership at the top.” Who's willing to step forward?



# *Technology Oklahoma<sup>^</sup>Footsteps*

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*Each author in this section was asked to respond to the following question.*

***“Consider the values and attitudes you see in Oklahoma. What are the challenges Oklahoma faces in meeting the high levels of technological development needed for an economy that will capitalize on the growth sectors of the 21st century?”***

*Each author was requested to suggest the one metric that best measures progress in this area – and explain the importance of that metric. The content is the sole responsibility (and choice) of the author as long as it was responsive to the question. The Academy did not dictate content to authors. Nor did the Academy edit content beyond grammar, punctuation and layout. This section contains those responses.*

## *A Glimpse of the Future*

*George Gilder, Senior Fellow, Discovery Institute  
Washington, DC*

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### *Editor Comment:*

*George Gilder was the keynote speaker at the Academy's 1992 Governor's Technology Conference in Stillwater. The theme of Mr. Gilder's address was that "sand and glass" (fiber optics and silicon chips) are going to change the world and insure that "your children will be more prosperous than you." That conference served as a catalyst to create favorable state tariffs for education and service digital networks; to create interest in OneNet - Oklahoma's public digital network; and was the first public forum to actively promote telemedicine in Oklahoma.*

To get a glimpse of the future, look at Japan, where fiber optics has already been deployed for some 15 million subscribers over the last three years on the way to 40 million. There, broadband Internet links do between 10 megabits per second and 100 megabits per second. They run such services as video streams, multiplayer games, HDTV downloads, cell phone TV, VPNs, karaoke, 3G CDMA wireless backhuls, and downloads to handsets faster than U.S. wireline broadband.

To bring these flows together, KDDI, Japan's second largest carrier, is rebuilding its entire network around 10 gigabit per second carrier class Ethernet boxes, for what they call "triple play" Hikari Plus: voice-over-IP (VoIP), Internet, video on demand, Pay TV, and karaoke. Maybe karaoke and TV don't count or maybe "Hikari" means quintuple play.

Japan may be first, but broadband is coming soon to a central office near you. No, it is not a sure thing. Competition is heavy and the market is still somewhat sluggish. Things could still go wrong. The politicians still think they should be permitted to yank the telcos and cable companies to and fro in exchange for campaign contributions. You know the riff—neutralize this, rip open that, trap door the transceiver, franchise all the wiggle room from DC to infrared, universalize service by taxing it like tobacco. It's a hard environment.

Technology competition is now thriving both in U.S. and in world communications markets. But potential investors in U.S. broadband still face a gauntlet of regulatory hurdles. Lined up against the hapless innovator are not only scores of government agencies in Washington but Corporation Commissions in fifty different states and tax gouges exceeding those on all other industries except tobacco and alcohol.

Meanwhile, capital and technology have moved to Asia, where they found a more hospitable environment. Without crushing regulatory restrictions or taxes to hold back development, Japan and South Korea have become the world-class broadband centers that the United States should have been.

The living room TV set is giving way to computers, entertainment centers, digital video players, multiplayer game machines, digital cameras and camcorders, color printers, video phones, all wirelessly linked and controlled by the customers rather than by the broadcasters.

This digital paradigm will ultimately take nearly all the revenues currently collected by analog broadcast television and analog telephony. TV is rapidly becoming merely another option for display of digital information. Telephony is a form of data. Though it may be impolite to say it, what is happening is the replacement of a rather degenerate top-down lowest common denominator culture with an "long tail" culture of first choices.

But first, the U.S. must overhaul its tax and regulatory policies. To their credit, the FCC has begun eliminating regulatory obstacles, such as the disastrous policy of guaranteeing new entrants in the business below-cost access to incumbent networks, which thus devalued both existing infrastructure and new facilities. The outgoing Treasury Secretary has scrapped a 3 percent tax on long-distance phone services enacted to pay for the

Spanish-American War, though this levy will still apply to local calls.

Congress and the FCC are trying to allow telephone companies seeking to build reliable, robust, jitter-free broadband networks capable of delivering quality video to do so without having to obtain permission from 33,000 sets of city officials. Oklahoma, which has been at the forefront in eliminating outdated regulation, has solved this problem.

Yet even in Oklahoma, taxes threaten to undo the progress made in deregulating broadband. In fact, state and local taxes on telecom services in Oklahoma are among the highest in the nation.

By increasing the price of broadband service to the consumer, these taxes lead to lower demand. Lower demand translates to reduced recovery on the investment needed from the broadband providers.

MIT economist Jerry Hausman estimates that taxes on wireless telecom services alone, for example, average about 18 percent, which so distorts the markets that service providers lose \$3 in revenue for every \$1 collected by the government.

High taxes will surely kill broadband, but it would be a mistake to assume that broadband will have to come at the expense of state and municipal revenues. Lower tax rates stimulate growth and ultimately yield higher revenues for government. In this case, competition between broadband providers will cause prices to fall and service to improve. Consumers will buy more service.

To see how, it is necessary to understand the concept of a “long tail” Internet that originated in an article by Chris Anderson, editor of *Wired*. As I predicted in *Life After Television* in 1990, customers don’t want choices; they want their first choice. That means that you can win not by focusing on mass markets but on providing people with what they want when they want it.



The result manifested itself first at Amazon, which as Anderson reported, gets fully 60% of its revenues from books NOT included among their top 150 thousand best sellers. Similarly “long tail” numbers show up at Netflix, Rhapsody, and other online vendors.

Long-tailed consumers will buck carriers’ TV franchise models, choosing instead each evening from among a century of feature films, half a century of TV programs, myriad niche and amateur videos—downloaded online at the click of a mouse. This will cause angst at cable networks, Blockbuster, and TiVo, but delight vendors supplying optics for disk backup and storage at centralized secure servers.

The TV-Hollywood culture is based on a scarcity of channels, whether theaters or bandwidth to homes. But with essentially infinite storage space, expanded bandwidth, and high-def “theaters” in every home, customers will get their first choice rather than the “hit” shows that are proffered. Since diversity is the chief characteristic of human beings in free societies, the lowest common denominator “hit” culture gives way to the—“long tail” of individual first choices.

The Japanese and the Korean examples prove that broadband can be robust, popular, and profitable. They also show that when new broadband connections are deployed, Internet usage in the United States will undergo a surge of traffic comparable to the 100-fold rocket of 1995 and 1996. Japan and Korea did this not with industrial policies and government subsidies, but with light regulation and low taxes.

By continuing our current policy, the United States will see its economic leadership, and then its military dominance, pass inexorably to Asia. It’s our choice.

## **Oklahoma Educational Technology Trust (OETT)**

*Susie Graves, Executive Director of Communities Foundation of Oklahoma  
Oklahoma City*

The Oklahoma Educational Technology Trust (OETT) is administered under contracts with Communities Foundation of Oklahoma with investment consultation from BancFirst. Communities Foundation of Oklahoma is a statewide community foundation with primary emphasis in charitable activities in rural Oklahoma and is managed by Foundation Management, Inc. led by Frank W. Merrick.



**MISSION:** The mission of the Oklahoma Educational Technology Trust is to equip Oklahoma common school and CareerTech students with the technology and technological skills necessary to compete in the global marketplace. The Trust provides funds for computer and telecommunications equipment, infrastructure, leadership and professional development to implement and advance integration of technology into classroom instruction. Southwestern Bell Communications provided \$30 million in initial funding for the Trust in 2001.

**PHASE I:** OETT has invested over \$1.4 million in leadership training and laptops for over 900 school superintendents and administrators.

**PHASE II:** OETT has committed \$7.55 million to grants in schools throughout Oklahoma which will include \$50,000 of technology equipment and connectivity and \$25,000 per school for professional development provided by the University of Oklahoma's OK-ACTS/K-20 Center.

**IMPACT:** In the first three years of OETT Phase II grants nearly 25,000 students have been served. Grants for these three years have also provided professional development to over 1,500 teachers across the state. In addition, 2004 grant schools indicate an 81% larger increase in API scores than the state average.

### **Phase II Grants - 79 Participating Schools**

*Alva Independent School District; Ardmore High School; Beggs Middle School; Blackwell's Middle School; Bridge Creek School District; Bridge Creek Elementary & High School; Broken Arrow's Park Lane Elementary; Byng Elementary, Francis Elementary & High School; Carney High School; Chickasha's Grand Avenue Elementary & Middle School; Cleveland High School; Colbert Eastward Elementary; Comanche Elementary & High School; Cottonwood Public Schools; Crescent High School; Deer Creek Elementary; Drumright High School; Duncan's Mark Twain Elementary; El Reno Alternative Academy & Roblyer Middle School; Elgin Middle School; Geary High School; Gore Elementary; Harrah's Clara Reynolds Elementary; Howe Public Schools; Hugo Elementary; Idabel High School; Jones High School; Laverne Elementary; Madill Elementary; Maysville High School; Moore's Central Elementary; Muskogee's Sadler Arts Academy; Muskogee's Tony Goetz Elementary; Noble's John Hubbard Elementary; Norman's Jefferson, Madison & Truman Elementary Schools, Alcott, Irving, Whittier & Longfellow Middle Schools, & Norman High School; Oaks Mission Public Schools; Oklahoma City's Classen School of Advanced Studies & Santa Fe South High School; Perkins' Tryon Junior High; Putnam City's James L. Dennis, Harvest Hills, Windsor Hills & Will Rogers Elementary Schools, Western Oaks Middle School & Central Intermediate; Quinton Junior High/High School; Rattan High School; Sand Springs' Angus Valley Elementary; Smithville Public Schools; Swink Elementary; Tulsa's Grissom & Wright Elementary Schools; Turpin Elementary; Tuttle High School; Vanoss (6-9<sup>th</sup> grade); Vici Elementary; Vinita's Will Rogers Elementary & Attucks Alternative High School; Wagoner's Ellington Elementary & Central Intermediate; Wanette Elementary; Watts High School; Waukomis School District; Westville Lower Elementary School; Woodward Elementary & Middle Schools;*

## ***K20 Center Engages Oklahoma Students***

*Mary John O’Hair, EdD, Vice Provost for School and Community Partnerships; Linda Atkinson, PhD, Associate Director & Leslie Williams, PhD, Director of K12 Research  
K20 Center for Educational and Community Renewal, University of Oklahoma*

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Bob Stevens, Chairman, President and Chief Executive Officer of Lockheed Martin, knows firsthand that educating young people in math and science is vital to maintaining our nation’s technological advantage.

“We have an ever-increasing need for highly trained, highly capable technical talent.” Lockheed Martin has established, supported and actively participated in many educational and mentoring programs; however, many more programs are needed. “All reports agree that the United States risks a declining standard of living if America postpones taking aggressive, strategic action to improve K-12 science and mathematics education. Few factors are more important than this if the United States is to compete successfully in the 21<sup>st</sup> century” (National Academies, 2005).

The University of Oklahoma’s K20 Center is responding to this national crisis by transforming kindergarten through graduate education into high-achieving, technology-rich learning communities that motivate, prepare and support Oklahoma students to ensure success. The K20 Center emphasizes education in science, technology, engineering and mathematics by

- **Engaging students at an early age** through interdisciplinary, inquiry-based, hands-on approaches that highlight connections and relevance to local and global issues and problems;
- **Ensuring support from school administrators and policymakers** to sustain innovations in teaching and learning in science, technology, and mathematics;
- **Providing professional development for K-12 science and mathematics teachers** to increase and deepen content knowledge and to promote high-quality intellectual work in their students;
- **Investing in research on teaching and learning innovations** to revitalize science and mathematics curricula and pedagogical approaches;
- **Identifying factors contributing to student diversity and success** in undergraduate science and engineering majors;
- **Communicating science and technology throughout the workforce pipeline** through a continuity of programs beginning at an early age and continuing until the individual enters the workforce.

The K20 Center focuses on the development and sustainability of technology-rich learning communities through the Oklahoma Achievement through Collaboration and Technology Support (OK-ACTS) program as a school improvement metric. OK-ACTS is an innovative and collaborative statewide program impacting 1000, mainly rural, Oklahoma schools and communities. OK-ACTS helps transform conventional schools into technology-rich learning communities using three interrelated and deepening phases.



*A student uses the interactive SmartBoard at Francis Elementary*

*Phase I: Leaders Learning* emphasizes the development of principals and superintendents to lead systemic change and technology integration in their schools and districts.

*Phase II: Teachers Learning* supports Phase I leaders by focusing on teacher development in creating technology-rich learning communities designed to enhance student success.

*Phase III: Students Learning* creates in-depth authentic learning experiences for students across science, technology, engineering, and mathematics (STEM) disciplines.



*K20 Center Oklahoma Science Project teachers in the field with Dr. Mark Nanny, OU School of Civil and Environmental Science.*

OK-ACTS' phases and infrastructure supports mutual learning among students, teachers, parents, and administrators, while constantly expanding the learning partnership to include scientists, engineers, and community/industry/government leaders. These learning communities extend into higher education and industry as students complete science, technology, engineering, and mathematics-related degrees and enter the work force. Over the past 10 years, the K20 Center has received over \$21 million in external funds from federal, state, and private sources (see note) to develop and sustain innovative, technology-enriched learning communities that motivate K-12 students to pursue scientific and technical careers.

The National Staff Development Council (2004) ranked K20 Center's OK-ACTS Leadership program 3<sup>rd</sup> nationally out of 50 state programs funded by the Bill and Melinda Gates Foundation in developing school and district leaders for systemic, substantive changes impacting student learning. K20 Center's partner schools reported significant increases in high-achieving school practices of shared vision, collective learning, peer observation/critique and technology access and transfer (Southwest Educational Development Lab, 2004).

Additionally, the State of Oklahoma's Academic Performance Index (API) increase for 2003 and 2004 K20 partner schools was 80 and 81 percent higher, respectively, than the state's average API increase (Office of Accountability, 2005). Empirical evidence suggests that student achievement is significantly higher in schools that function as technology-rich learning communities, as K20 Center promotes, than in traditional schools (Atkinson, 2005; Williams, 2006).

The K20 Center's programs that specifically target science, technology, engineering, and mathematics (STEM) instruction have impacted 40 schools. By 2007, the numbers will increase to over 90 schools, impacting over 20,000 Oklahoma K-12 students.

The K20 Center is just getting started. Initial accomplishments in the STEM disciplines include:

- **Student Interest and Motivation:** Through inquiry-based, hands-on, authentic instruction, students pursue higher level science and mathematics courses leading to scientific and technical careers.
- **Teacher Learning:** Teachers develop inquiry-based science by collaborating with their colleagues, conducting authentic research with university faculty, participating in K20 institutes, and translating their learning back into their classrooms by encouraging students to identify, analyze, and solve complex problems collectively, as teams of scientists do.

- **Principal Learning.** In supporting inquiry-based science instruction, principals provide additional resources, structures, and time for teachers to learn together and with university and industry colleagues.
- **University Participation.** University faculty and students from the Colleges of Arts and Science; Architecture; Atmospheric and Geographic Sciences; Earth and Energy; Education; Engineering; Fine Arts; and OU Health Sciences Center are working with K12 educators to improve science, technology, and mathematics teaching and learning.

***Imagination is more important than knowledge. — Albert Einstein***

OU *dares to imagine* producing the intellectual capital necessary to ensure the future scientific and technological workforce by providing tremendous support to the K20 Center. OU is:

- (1) establishing the Office of the Vice Provost for School and Community Partnerships to communicate science and technology to the public and policymakers and to network locally and globally to enhance science and technology literacy in *all* citizens;
- (2) providing a management team consisting of a director and four associate directors;
- (3) researching and supporting science literacy for young children through adults;
- (4) building state-of-the-art facilities on the OU Research Campus designed to demonstrate 21<sup>st</sup> century learning;
- (5) providing new faculty lines with research and teaching emphases in student engagement and science and technology literacy;
- (6) recruiting globally for visiting research scientists to stimulate new, innovative approaches to learning;
- (7) funding faculty and student fellowships designed to stimulate research and to bridge the gap between common and higher education classrooms; and
- (8) providing incentives for K-12, industry and global partnerships such as student and teacher internships and institutes, virtual field trips, and mock, student-led companies in K-12 schools.

The K20 Center believes that “*We the people* needs to become “*we the planet*” and a high quality science, technology and mathematics education for *all* is crucial to our nation’s future innovations and to our planet’s global citizenship.

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## ***Ardmore High School***

*Shirley Morgan, Director of Secondary Curriculum, Ardmore Public Schools;  
Denise Brunk, Assistant Principal and Addie Downing & Carol Norman, Teachers  
Ardmore High School, Ardmore*

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Dr. Douglas B. Reeves (2002) writes about school change in his book *The Daily Disciplines of Leadership*: “Change does not occur as it does in a marching band, where the drum major gives a signal and, in a quarter of a beat, the entire unit is transformed. It is far more likely that change occurs like a pebble in a pond. The first pebble cast into the water makes a few skips, and then settles into the pond with a few ripples around it. The second pebble lands in a slightly different place, making some additional ripples. Some of the ripples of the second pebble intersect with those of the first pebble, while other ripples enter new territory of the pond (and, even more, the number of intersecting ripples) is incalculable.” (p. 45-46)

In the Spring of 2004, the building principal invited several of the staff to consider participating in a grant that would provide technology and professional development. The Oklahoma Educational Technology Trust / Oklahoma Achievement Through Collaboration and Technology Support (OETT/OK-ACTS) Partnership Grant allowed for the addition of several new elective classes in an effort to provide instruction utilizing the new technologies for students in need. The classes targeted students who were academically at-risk in English and math. These students were provided additional instructional time and individualized instruction. This grant also provided frequent assessment and adjustments in classroom instruction based on authentic assessment data.

Seven staff members were selected to serve as Learning Team Mentors. They were selected

based upon their (1) professional and personal initiative, (2) self-reflective nature, and (3) established respect and trust from their peers. These mentors represented both educators relatively new to the teaching field as well as veteran educators. In addition, the selected mentors represented teachers from the four core areas as well as technology. One learning team member described the mentors as follows: “They were teachers who took on that role from across the curriculum with a good variety of backgrounds and good people.”



Carol Norman AHS teacher and  
Ruth Ann Carr, Superintendent of APS

First, the OETT/OK-ACTS Partnership Grant provided technology equipment that facilitated authentic learning for students, individualized programs for students in need, as well as prompt feedback to students and teachers regarding student performance. First, the grant provided hardware in the form of laptops and a wireless lab. In addition, a

Classroom Performance System (hardware and software) was purchased, which allowed for assessment and tracking of student progress in mathematics. Two-thirds of the grant funds were devoted to our hardware and software needs.

A teacher working with these classes stated, “They’re very excited about it [technology] and very inquisitive. They’re all over it and use every bit of technology that they can.” When asked if students are motivated, teachers responded, “Oh yeah . . . it’s fun and so different than just listening to lecture. They get to create work, become involved in their learning, and are very engaged. They get excited about that.” The bottom line according to teachers, “The technology is a great

tool to enhance student learning.” Comments like this are commonplace now from our teachers since we received the OETT/OK-ACTS Partnership Grant. Thus began our metamorphosis.

Secondly, the remaining one-third of the OETT/OK-ACTS Partnership Grant provided for professional development. The team initially discussed the form and content of professional development. Some consideration was given to the use of professional development money in the form of stipends for learning team members for professional development sessions, which would likely occur outside the school day. However, it was decided by the building administration and learning team mentors that the entire staff should be included in the technology training in order to promote learning for all staff as well as discourse within the school day.

The administration and mentors made the decision to create a tier system of professional development where they would receive professional development and then, in turn, provide the same training for the staff at large. As a result, the decision was made to spend the money on substitutes and staff release time rather than stipends for a select few.

In order to facilitate a tier system of professional development, each learning team mentor assumed responsibility for the training and mentoring of a heterogeneous group. Just as in the classroom setting and the development of cooperative learning groups, careful consideration was given to the individual teacher personalities, strengths, and weaknesses. Once these learning teams were formed, the mentors led the teachers in dialogue to identify areas of need and interest that could be addressed through professional development and, in turn, integrated into classroom instruction. It was crucial that topics for professional

development be relevant, authentic, and related to available technology.

One learning team member described the professional development that he received in the following way: “It was never taxing. It didn’t feel like it was more work.”

Another learning team member described the use of the professional development received and the integration of technology combined with the collaboration of staff by saying, “It meant something special. It was a good thing for us. I never heard anything negative when we got together for a workshop, only positive. We all have benefited greatly from it. The teachers and kids were getting additional opportunities, and it was a win-win situation.”



It is important to highlight that the OETT/OK-ACTS Partnership Grant provided for a relationship with the K-20 Center for Educational and Community Renewal, a university-wide research center at the University of Oklahoma, as a resource of expertise and professional development. The K-20 Center customized resources

and training for our site that would facilitate our successful implementation of our grant; this relationship was paramount.

Our OETT/OK-ACTS Partnership Grant addressed three of the *10 Practices of High Achieving Schools*. The first practice was Shared Values, Common Goals, and Shared Purpose. Through cooperative processing and frequent open communication, our staff, parents, community, and students agreed on a common set of goals. Our school was lacking in computers, lab access and appropriate software. This grant allowed us to provide a portable computer lab, providing flexibility and common access.

The second practice was Authentic Teaching, Learning, and Assessment. This goal was driven by the need to use assessment data to drive student improvement and growth with the emphasis on individualized needs and instruction. It was imperative that assessment not simply conclude learning but rather be an integral part of instruction. The grant provided for an efficient method of authentic assessment.

The third practice addressed our Concern of Equity. Students entering our school today come from a variety of backgrounds, cultures, and socioeconomic levels. With each of our students being unique, it is ineffective and inefficient to continue teaching them as if they were alike.

It was crucial to the entire staff that the professional development obtained support these practices and then, in turn, be integrated into classroom instruction. One staff member stated that “. . . technology was the tie-in because it bound and brought everyone together. . . . We were all headed in the same direction with the same goal.”

The OETT/OK-ACTS Partnership Grant provided much needed technology equipment as well as our careful assessment of where we were as a school and where we wanted to be in relation to our school’s and students’ academic needs. However, the most important and unexpected outgrowth was the collegiality that grew from the Learning Teams.

The tiered system of professional development allowed the Learning Team to provide non-threatening, educationally relevant instruction. This, in turn, trickled down to the instruction that the students received.

When a teacher was asked about what she had learned and how it had impacted her teaching, she responded, “It provided other strategies or opportunities to teach information that the kids were interested in because they [students] love

technology anyway; it enriched my whole teaching. The grant made us hungry for more.”

One learning team member said it best: “School has changed drastically because of technology. . . . Because we’re a technologically advanced society, students need to know how to use technology. The kids like technology. . . .” Recognizing this and being willing to adapt to the students’ needs is imperative in preparing our students with the skills and knowledge needed to both survive and compete in a global society. The impact of technology in the instructional setting is twofold.

First, when the teachers utilize technology in the classroom, it directly impacts student learning. The technology has provided another medium through which students can engage in higher order thinking as well as collaboration and problem solving activities. “The students get to create work, become involved in their learning, and are very engaged. They get excited about that. . . it’s a great tool to enhance learning.”

Second, students’ use of and exposure to technology are basic survival skills for their future. This holds true for students pursuing higher education - whether academic or vocational. However, it also holds true for students going directly into the workforce after high school. Without a foundational knowledge of how to utilize and negotiate the rapidly growing and changing world of technology, our students as well as all students in today’s world will not be able to survive much less compete with their peers outside our country’s borders.

In conclusion, Dr. Reeves summarizes meaningful change as casting some pebbles in the pond, rather than attempting to orchestrate a marching band. The ripples are often unpredictable and even chaotic (2002).

## ***Roblyer Middle School***

*Sharon Wilbur, Principal*

*El Reno*

Almost every school district has a mission statement that says something about educating students to be part of a global society. However, after reading Friedman's book, The World Is Flat, schools must ask themselves if they are truly preparing students for a world where technology has indeed leveled the playing field. Friedman says that the world needs citizens who are smarter in different ways than those currently graduating from traditional educational systems. This is the story of how one suburban middle school has changed the way it views its students and how they are taught.



Four years ago our school was similar to many in Oklahoma. We were teaching basically the way we were taught and getting less than satisfactory results. As we looked at student achievement data, we continuously saw inequities between various ethnic and socio-economic groups. Decisions were made by a few selected faculty members with very little input from parents and even less from students. That was the way it had always been, and few questioned the status quo.

In 2003, the principal applied to participate in Phase One of Oklahoma Achievement through Collaboration and Technology Support (OK-ACTS) Leadership training, little realizing the course she was setting for the school's future. Because of that training, she began discussions with teachers about professional learning communities in which student achievement data led to questions for school improvement. All questions became topics for discussion by the entire faculty. Teachers began to look to research about best practices for answers. We were on our way toward becoming a group of professionals that wanted more data, welcomed chances for inquiry

and discourse, and fearlessly tried new approaches to old problems.

In 2004, the faculty decided to apply for the Oklahoma Educational Technology Trust (OETT) grant as part of Phase Two of OK-ACTS program. Again, using the data we had collected during previous years,

we were able to identify three areas for our goals: equity, authenticity, and collaboration. We believed that those three issues were so intertwined that one could not be accomplished without the other, and the tool needed to make it all happen was technology. Our grant provided training in using technology for authentic instruction. Because technology was so new to the teachers, they instantly found that they had to collaborate not only with each other, but with students, who were soon seen as fearless explorers of all things "techie". We purchased graphing calculators for every math classroom, SMARTboards for every team and equipped a new technology communications lab. We started seeing immediate results.

Students who had once sat back, content to drift from class to class and from grade to grade, were now sitting up and participating in class. Students that teachers had written off as "unmotivated" were now taking leadership roles and performing at high levels. In fact, teachers often had to turn to students to teach them how to use the new technology. Learning was no longer just from teacher to student, but was now an interactive path on which everyone was traveling. The biggest change came through the "tech. com." class. In this class, students were required to work as part of a team to choose, write, film, edit, and produce a video about anything they had learned in

some other class. As students began to realize the unlimited possibilities, their youthful imaginations took over. It was all the teacher could do to stay up with them. They produced videos about character traits such as honesty and self-discipline. They produced videos about test taking skills and testing vocabulary. They produced videos about science, language arts, and math. Students were seen all over the school with their cameras, scripts, and “action” clap boards. They gave up lunch time to work on projects. They came in before and after school to work. The teacher gave up personal time to accompany them to evening events that they wanted to include in their films. We had created a monster, but a very friendly and educational one.

By 2005, our school was transformed into a model of progressive teaching and learning.

“Authenticity” had become the key word discussed in team meetings. Lessons were being connected to the real world outside of school in bigger ways than ever before. The tech.com class is now producing films for the local historical museum, the larger school district, the Indian Clinic, the Chamber of Commerce, and any business that can get signed up. Our students and their talents have become a hot commodity in our community. Schools from all over the state and even from Texas and Missouri have come to visit and see what is going at our school. Students are truly seeing that what they are doing and learning does have value outside of the classroom. And with that kind of self efficacy comes a level of motivation that has carried over in all areas of school life.

During Phase Three of the program, further training was provided in science. Again, by emphasizing authentic teaching practices through technology, our content teachers are striving to duplicate what is being experienced in the tech.com class. As all areas continue to learn and share with each other, the movement grows, and the students profit.

Student successes were celebrated during morning assembly by having their video shown on the big screen or receiving an outstanding score on a

monthly assessment. Through these experiences more and more students are working just a little bit harder so that they too can be recognized and praised. Also with each student success, the adults began to see the students with new eyes. We realized that these kids did have something to say and that it was good. So we began to share, collaborate, and ask more of our students; we also valued what they knew.

Giving voice to middle school students through technology and communication has paid off in terms of equity in student achievement. This year, for the first time ever, we have reached equity! Students of all ethnic groups achieve on equal levels. Grades have improved overall with fewer students failing, fewer students ineligible, and fewer students having to attend summer school. We have worked hard for this goal and have celebrated those accomplishments throughout the year.

How has this OETT grant made a difference? The difference is like night and day. Our school has truly been changed from a traditional school that taught those that were able and interested, to a school where all students are seen as more than able and all students are not only “hooked on phonics” but hooked on learning. I believe that our school is developing students who will become contributing workers in a global society that demands creativity, teamwork, problem solving, self-discipline and diversity. These needed qualities are all tied to our goals of equity, collaboration, and authenticity.

My one big concern is for the remaining years in education that our students will face. I believe, and my teachers and students have testified to that belief, that we are sending students ready and willing to continue to excel in high school. However, I also know that the high school has not been through the training provided for my staff. Nor do they have the technology to keep students performing at the same level. Our students have, in fact, already expressed a hesitation in leaving what they know is a school of excellence where

they have the tools and atmosphere to excel. I only hope that what we have instilled in them is enough to carry them through.

What then can OETT do to improve its program? Simply continue to train more and more schools with the same leadership skills and provide the needed technology so that those schools can also be lead into the 21<sup>st</sup> Century. We must heed Friedman’s warnings and develop schools and classrooms that are as flat as the world in which they exist. OETT can provide the leveling agent of technology.

### **Post Scripts**

Not only do the data show success toward our goals of equity, authenticity and collaboration, but our students and teachers give testimony to that success. Some quotes include:

### **STUDENTS**

“Technology brings learning into our own century.”

“Technology helps us to learn in class, but then go home and use it!”

“Technology lets us get information and knowledge all the time.”

“Technology has motivated people to be more cooperative in class.”

“My other school hungered for technology. It’s like a morale raiser.”

“Lots of students feel helped and lifted up because now people that maybe have been mean or rude help them with work on the SMARTboard.”

“You can’t do everything by yourself. Even if you don’t want to work in a group, try it anyway. You never know, they could have some pretty cool ideas.”

“Technology has students working together with teachers, each learning how to use advanced technology together, not just teachers teaching students. Teacher are learning too.”

“Teamwork on an assignment is easier than going it alone.”

“Students can now stand up in front of a group and talk and not be scared.”

“Students work together to find answers and then cheer each other on.”

“Technology helps us understand more of what we are learning so we know we will succeed.”

“Schoolbooks often try to compare things to reality, failing by a long shot. But having access to the Internet is as real as it gets.”

### **TEACHERS**

“Teaching needs to be authentic.”

“Realize that you can not possibly know all there is to know.”

“We need to instill the skills needed to survive in this competitive world, more than just listen to me and answer the questions on the test. We need to teach how to problem solve and discover how to excel.”

“Leadership is key...every aspect of life is lead by someone...like the ducks, lead, follow, or get out of the way.”

“Student discourse is huge in my class...We teach each other, they are natives and I am an immigrant. I must not be threatened by not knowing.”

“Be the kind of teacher you want your students to be; willing to change, adapt, learn, stretch yourself.”

## *Mark Twain Elementary*

*Jo Ann Pierce, PhD, Principal  
Duncan*

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For Oklahoma's Mark Twain Elementary students, the future is much brighter than it was a short five years ago. Mark Twain Elementary School is a K-5 two-section school nestled in the southwest quadrant of Duncan, Oklahoma. In 2001, the school was scheduled to close due to District-wide declining enrollment and state financial cutbacks. Jo Ann Pierce, a doctoral candidate at the University of Oklahoma, a twenty year veteran teacher, 1990 Oklahoma Teacher of the Year Finalist and previous principal of two other schools was assigned as new principal.



Pierce and staff laid a foundational plan for the renewal of the entire school and its surrounding community during her first year at Mark Twain Elementary School. A new mission statement, collectively written, started the change process.

*The mission of Mark Twain Elementary School is to provide opportunities for students to reach their fullest potential through the combined efforts of parents, teachers, and the community. (Adopted January 2002)*

The fifty year-old "Roughrider" mascot, was updated with the Celebrated Jumping Frog. Taken from author Mark Twain's most notable newspaper story, "The Celebrated Jumping Frog of Calaveras County," the frog sent a cycle of rebirth throughout the campus and beyond.

The mission of reaching each child's full potential meant that Mark Twain students, teachers, and parents would help every child to achieve at higher levels. Not only did they need to raise test scores to be more accountable to their community and

state, they needed to fully understand the Secretary's Commission on Achieving Necessary Skills (SCANS). SCANS determined that the children of America need resources and skills, such as interpersonal skills for working on teams and getting along with diverse groups, using computers to process information, understanding technology, and applying technology to specific tasks, to be successful in the work world.

Parents across Oklahoma were warned that their children must master these skills and that their local schools must teach it. If children did not learn these skills by the time they left high school, they would face bleak prospects—dead end work, intervals of unemployment, and little chance to climb the career ladder. Recognizing the challenge, the staff at Mark Twain began an intensive improvement that would enrich each child's foundation at the elementary level.

During the 2002-03 school year, Pierce was one of 800 Oklahoma principals and superintendents targeted to complete Phase I of Oklahoma Achievement through Collaboration and Technology Support (OK-ACTS). OK-ACTS, funded by Bill and Melinda Gates Foundation and the Oklahoma Educational Technology Trust (OETT), trained Pierce in leadership and technology skills to improve student achievement and facilitated plans for systemic change at Mark Twain.

This included authentic student learning through technology integration and professional learning community development. Pierce and her staff were soon engaged in collaborative networking across the state of Oklahoma. OK-ACTS professional development using technology was provided by

the K20 Center at the University of Oklahoma. A laptop, earned by Pierce, helped lead the development of Mark Twain Elementary School as a professional learning community using technology to impact student achievement. The *IDEALS* and *10 Practices of High Achieving Schools* framework, a research model introduced by Dr. Mary John O’Hair at the University of Oklahoma, became a model for school renewal for improving student achievement.

The online survey, TAGLIT [Taking a Good Look at Instructional Technology] (Cory, 2000), helped the Mark Twain staff to set a vision for using technology to improve student achievement. The initial survey was a daunting experience for those who had never used computers. The survey revealed that many had not received the technological training that would enhance their classroom practices. The most highly-qualified teachers convinced their colleagues that using technology as a tool for improvement would help everyone get better. Through data-driven decision making, using technology to manage the data, and implementing the *IDEALS* and *10 Practices of High-Achieving Schools* framework, Mark Twain teachers began to set goals and assess their progress singularly and collectively. They chose three practices from the IDEALS framework to implement at Mark Twain and collaborated on the OETT/OK-ACTS Phase II Grant: 1. Shared Values, 5. Teacher Collaboration, and 8. Community Connections.

Mark Twain was one of twenty-one schools in Oklahoma that received the OETT/OK-ACTS Phase II Grant in August of 2003. Just as the OETT/OK-ACTS partnership had promised, Mark Twain students would receive the technology and beginning technological skills necessary to compete in the global marketplace. The Trust provided \$79,000 for computer and telecommunications equipment, infrastructure, leadership and professional development to implement and advance integration of technology into classroom instruction. At Mark Twain, inquiry,

discourse, equity, authenticity, leadership, and service were integrated into the process.

Thirty-three new computers for the classrooms; three work stations with computers, Interactive Smart Board, LCD projector, color laser printer for the computer lab; and extra site licenses for Success Maker were purchased with grant funds. Year-long hands-on professional development sessions to facilitate Mark Twain teachers in the integration of newly-purchased technology into their lesson plans were conducted on site.

No Child Left Behind (NCLB) as well as Practice 8 of the *10 Practices for High Achieving Schools* framework for Student Achievement model called for increased parent and community involvement. Mark Twain’s Title I Advisory Team grew into a 21-member team of 9 educators, 5 parents and 7 community members. At school year’s end everyone at Mark Twain agreed, “It takes everyone in the bog to raise a frog!” Reading Upgrade was purchased as a technological component for summer school while others created a lesson plan template to begin using in the fall; OETT/OK-ACTS Phase II grant technology and training were contagious.

By 2004-05 Pierce and colleagues had received a \$50,000 Comprehensive School Reform (CSR) Grant to implement best practices in reading and math to raise their challenging test scores. They partnered with the Center for Effective Schools (CES) and implemented three more practices of the *10 Practices for High Achieving Schools* improvement model: 2: Authentic Assessment, Teaching and Learning, 3: Shared Leadership, 10: External Expertise as the OETT/OK-ACTS grant continued their three-year commitment to professional improvement using technology as a tool. The OK-ACTS technologists arrived on site to model technology usage.

A district bond issue placed 52” large screen TV’s in each classroom. Mark Twain’s grant computers were wired to the TV’s which were equipped with DVD/VCR players. These additions coupled with

top quality on-going professional development provided access to technology best practices in reading/writing and math using technology as a tool for improvement. Students and teachers learned in new and exiting ways; they readily embraced the Waterford Early Reading Program in grades K-2, SEMS, SASI, ABACUS Curriculum Alignment, INETEGRADE PRO grade book, Success Maker, Knowledge Box and ALL THE WRITE TYPE software. A Learn and Serve Grant provided a 30 station Alpha Smart mobile computer lab. Lesson planning to evaluation and curriculum change made learning more fun for teachers and students. The newly written words from the Mark Twain song rang true, “High, high, higher, celebrate, aspire!”

As the 2005-06 year closed, Mark Twain’s staff had participated in professional development to integrate technology and science instruction through the K20 Center/Oklahoma Commission for Teacher Preparation’s Professional Development Institute’s Science Grant. This grant also provided two hands-on science kits for each grade level, four LCD projectors, four SMARTBoards, a computer and printer for the Alpha Smart mobile computer lab, and digital cameras. Pierce and colleagues grew in confidence, knowing that all of their growing grant purchases were connected to the curriculum and aligned to Oklahoma PASS Objectives.

Parent and community connections grew, and the revived Mark Twain PTO replaced out-dated computers for eight teachers. The staff concentrated on three practices of the IDEALS model: 2. Authentic Teaching and Learning, 6. Inquiry and Discourse, and 8. Community Connections. The school was awarded a 2<sup>nd</sup> Place CCOSA Technology Award, and Dr. Pierce was named as a finalist for Oklahoma’s Distinguished Principal. Abby Ruiz, a Mark Twain 5<sup>th</sup> grade student, said it best, “Our school is the best...frog races, computers everywhere, the best teachers...I don’t want to leave.”

As the Mark Twain staff begins 2006-07, Waterford Early Learning computers will be replaced, non-fiction Guided Reading books that will compliment their hands-on science program will be purchased, and CES training will be provided with the final portion of the CSR Grant. The strong ties with OETT/OK-ACTS continue. If one walks into Mark Twain in August, they would view children researching hermit crabs on the Internet and Knowledge Box, habitats for their creatures being built, and recording scientific research in their journals. Finished products would include stories using the writing process published with Word. All of this activity might be showcased at a Friday Afternoon Assembly using digital pictures taken by students then captured in a PowerPoint presentation. Authentic learning has replaced trite traditional practices.

During 2006-07, Pierce and colleagues will promote three of the *10 Practices of High Achieving Schools*: 2. Authentic Teaching, 5. Teacher Collaboration, and 7. Supportive Leaders. The Mark Twain professional learning community has received applause for their clarity in using technology to enhance academic performance. The combined efforts of parents, teachers, and the community in collaborative activities and the continual evaluation of process have allowed implementation of technology to be highly effective. School improvement is visible at every turn. The OK-ACTS Phase I initiative and OETT/OK-ACTS Phase II Grant have made a remarkable impact. With the initial \$79,000 grant and its rippling effect to students, parents, teachers, and the community, “Mark Twain Elementary School is jumping sky high!”

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## ***Technology & The Chickasaw Nation***

*Brian Campbell, CEO, Chickasaw Enterprises*

*Ada*

It is truly amazing to look back over the past hundred years of Oklahoma history and consider just how much technology has changed the way people live and work. The Oklahomans of 1907 could scarcely dream of the technological marvels that modern Oklahomans depend on daily to perform even the most mundane tasks. A hundred years ago, families from the budding metropolitans of the east seeking adventure and opportunity in our newly formed state had to brave a long and treacherous journey filled with both promise and uncertainty. Today they can research local communities, schools and jobs on the Internet before deciding whether to take a trip that can be made comfortably in a matter of hours rather than days.

Technology touches virtually everything we do in our business and personal lives. As a result, science and technology industries are among the most dynamic growth sectors in the world's economy today. By all accounts, this trend shows no sign of slowing in the foreseeable future. The challenge Oklahoma leaders face moving into the next century of statehood is to develop a comprehensive, long-term strategy to take full advantage of the opportunities presented by these growing sectors of the global economy.

Oklahoma already has tremendous potential to capitalize on this trend in the coming decades, thanks to existing qualities that make the state a desirable location for technology-related infrastructure and staff. Oklahoma's central location is ideal for the placement of secure data centers for both private industry and the military. The state is also an attractive option for locating



staff. Oklahoma's standard of living and real estate market are relatively inexpensive; especially when compared to established technology centers near the coasts. The state's low crime rate and conservative culture also present key recruiting advantages for organizations desiring to bring in talented professionals who are looking for a good place to settle and raise children. The key to developing a successful

long-term plan is to create strategy that will allow the state to build upon these strengths.

A number of states have been capitalizing on the technology boom for years. The states that have been particularly successful in attracting technology industry and establishing themselves as knowledge and technology centers have done so primarily by developing solid educational infrastructures that foster technological growth and development. This suggests that Oklahoma's strategy for technological development must include plans to bolster the state's educational system by providing for enhanced science and technology programs at all levels.

A quality education system is an important part of any technological development strategy for a number of reasons. One reason is that it is necessary to facilitate the development of a sophisticated and highly skilled workforce. The availability of a well-trained labor source is often a critical determining factor in the decision of any technology company to locate all or part of its operations in a particular state. Companies want to be sure that they will be able to recruit personnel with the skill sets necessary to perform at a level

that will allow their business to remain competitive.

Another reason is that Oklahoma must be able to produce talented technology professionals to help build state and local technology infrastructures that are required to support the logistic needs of technology related industries.

Finally, in addition to producing skilled science and technology professionals, colleges and universities can also serve as catalysts for economic development in the science and technology sectors. For example, many important scientific and technological breakthroughs from research conducted by faculty and students in laboratories at institutions like MIT have resulted in exciting new commercial opportunities for both entrepreneurs and established technology firms.

This phenomenon has prompted many companies to develop relationships with universities that foster and leverage scientific and technological research for the mutual benefit of both the university and private industry.

Oklahoma schools have made significant progress in recent years by working to incorporate technology into classrooms. Nevertheless, there is still much room for improvement. The state must continue to provide more resources to allow public schools at all levels to maintain the most up-to-date computer systems and software applications. Oklahoma schools must also continue to place more emphasis on math- and science-related subjects for students at earlier ages so they are adequately prepared for challenging science and technology programs at the college level.

State leaders must also work to ensure that Oklahoma's colleges and universities have ample resources to produce highly skilled technology professionals who can successfully compete in today's job market. This includes not only funding for equipment, but increased funding for salaries to ensure that Oklahoma's teachers include the best and the brightest available. While the initial costs

associated with these initiatives will be substantial, the long-term benefits for the state's economy would repay the investment many times over.

In addition to plans to improve the state's educational infrastructure, Oklahoma's technological development strategy must address the state's technology infrastructure needs as well. Much of the state still lacks either reliable broadband access or sufficient bandwidth to meet the demands of technology-related industries. Expanding the state's technology infrastructure to rural areas could help revitalize many of the Oklahoma's rural communities.

Special incentives and assistance packages should be included in Oklahoma's technological development strategy. By offering special tax incentives or assistance with capital and startup needs to companies in science and technology related industries, the state could better position itself to compete for economic growth and development in those sectors.

Oklahoma might also leverage public university resources to provide assistance to science and technology entrepreneurs who may require technical assistance to develop their ideas or assistance with writing business plans. A number of countries in Asia and Europe have established facilities near universities to provide such services.

With a focused long-term vision, creative planning and investment in its people, Oklahoma can develop a knowledge base and technology infrastructure that will establish the state as an attractive option for the growth industries of the future.

An effective measure of Oklahoma's performance in this regard would be to monitor the percentage of the state's GDP that is derived from science- and technology-related industries. The level of investment Oklahoma can garner from these growth industries would be a good indicator of the state's success in its next century of statehood.

## ***Making Biotech the Next Gusher***

*Stephen M. Prescott, M.D., President  
Oklahoma Medical Research Foundation, Oklahoma City*

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The fundamental economic challenge that Oklahoma faces in the 21<sup>st</sup> century is at once straightforward and maddeningly complex: How do we transform today's oil boom into tomorrow's knowledge-based economy?



Of course, things look pretty rosy right now, with energy demand—and prices—surging. But at some point, the wells will run dry. And before they do, we must create a new economic engine to drive our state.

For a good blueprint, we should look at what Dubai, Abu Dhabi, Qatar and Saudi Arabia are doing. This quartet of Middle Eastern countries is using the wealth reaped from oil and gas production to build biotech sectors. It's part of a wider strategy to develop an infinitely renewable, knowledge-based economy whose gross domestic product is no longer dependent on resources pumped from the ground.

The Middle East is about as well-known for biotechnology as it is for skiing. Yet these four oil-rich nations recognize that the derricks cannot keep pumping forever. So while the energy revenues are flowing strong, they're redirecting some of those dollars to build lab and office infrastructure and lure biotech talent from around the world.

The countries are employing different strategies, but there are common elements: increased grant funding, partnerships with academic and nonprofit research institutes, and government support for the construction of new research facilities. The strategies share much with another research funding package - the one that Gov. Henry signed into law this summer.

That package will provide a much-needed shot in the arm for laboratory and office infrastructure, supplying funds to construct four new centers of research excellence in the state: diabetes and cancer institutes at the University of Oklahoma Health Sciences Center, a sensor technology center at Oklahoma State University, and a new research tower at the Oklahoma Medical Research

Foundation. The state will also deposit \$150 million for a research endowment. Each of these initiatives will help our state attract and keep a critical mass of researchers, a must for improving our state's physical and economic health. With record oil prices and a surge in production tax revenues, this is the ideal time for our state to invest in biotechnology infrastructure. By rechanneling some of the fruits of today's oil boom, we are paving the way for a tomorrow in which our state's economic future depends less on finite natural resources than on our citizens' intellectual capital.

Yet this year's funding package should be a first step, not an endpoint. If Oklahoma is to compete nationally and internationally on the biomedical research and biotechnology stage, we must add many new researchers.

Earlier this year, the State Science and Technology Institute released a state-by-state analysis of National Institutes of Health research awards from 2000-04. During that four-year period, Oklahoma's NIH funding grew by 97.7 percent, from \$44.4 million to \$87.85 million. This growth rate easily outpaced the national average of 53.2 percent and ranked us eighth among all states and the District of Columbia.

Unfortunately, measured by NIH funding per capita, Oklahoma still averaged just \$25 per citizen, less than one-third the national average of \$78 per citizen.

As the leading supporter of medical research in the country, the NIH provides over \$20 billion annually in funding for medical research. NIH dollars are the engine that fuels biomedical research and the for-profit biotech economy that springs from that research. It is no coincidence that California tops the charts both in NIH awards and biotech business.

The scientists in our state are as good as those in California. At OMRF, our principal investigators are now securing an average of about \$600,000 a year in NIH awards. This puts them on a par with the best researchers anywhere.

The problem is numbers. OMRF, which represents more than a third of the state's medical research funding, simply doesn't have enough scientists to put our state in the same league with California, which averages about \$100 in NIH funding per capita, or even Alabama, which has a \$72 per capita average.

As we move ahead, this per capita NIH funding number should be the metric we use to gauge our progress. This number is crucial—it measures how much money our citizens invest (in tax dollars, of course) to fund the NIH, the primary supporter of basic biomedical research in the U.S. This number is the most accurate barometer of how much biomedical research is taking place in the state.

Right now, we are paying out much more (\$78 per citizen) than we are bringing in (\$25 per person). With approximately 3.5 million citizens, that means Oklahoma tax dollars are underwriting approximately \$270 million worth of biomedical research, but the lion's share of that figure - roughly \$185 million - is funding research that is taking place somewhere else (like California or Massachusetts or Alabama).

For Oklahoma to establish a national presence in biotech and biomedicine, we need to grow our NIH per capita funding numbers steadily, so that one day, hopefully, we will be receiving as many NIH dollars as we are providing in taxpayer support. If we make the investments necessary to reach that mark, biomedicine and biotech will become a driving force in Oklahoma's economy.

Our first milestone might be to achieve parity with neighboring states, and then to hit the median for all other non-coastal states. But ultimately, we need to be globally competitive, which means that we should achieve - even exceed - the national average for per capita NIH funding.

Biomedicine is, of course, a good unto itself, yielding discoveries that prolong and improve lives. It can also fuel our state's economy with an infinitely renewable resource: the human mind.

If we make the commitment to continue to invest windfall energy revenues into our state's biotech infrastructure, we can transform today's oil boom into tomorrow's brain boom.



## ***A Digital Solution to Specialty Care Shortages for Rural Oklahoma***

*John Fernandes, D.O., MBA and James D. Hess, Ed.D.*

*OSU Center for Health Sciences, Tulsa.*

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*The continued development of the non-urban areas of our state will depend greatly on the ability to provide both primary and sub-specialty healthcare to the residents of less populated areas. This paper discusses the demographic reality of specialty physician shortages and the utilization of telemedicine technology to increase access to specialty care in underserved areas.*

### **Introduction**

Economists and economic development experts agree the growth of the agricultural and industrial base, as well as the economic development of our smaller towns and cities, will depend principally on the ability to attract and retain a well educated and trained work force. But education and training is a single factor in a milieu of socioeconomic issues affecting the future of small towns and cities. Indeed, one of the single most important factors affecting the quality of life of rural families and subsequently the ability to retain those families in a non-urban setting is access to quality healthcare. By any definition quality healthcare centers on the availability of both primary and sub-specialty care physicians.

The availability of primary care physicians to practice in non-urban settings has been a matter of public policy development within our state for more than three decades. The Physician Manpower Training Commission (PMTTC), created by statute in 1975, has performed admirably in the placement of family practitioners across the state, particularly in communities with less than 10,000 in population. The Commission operates programs providing scholarships, loans and loan forgiveness to attract, recruit and retain medical students, residents and physicians to underserved areas across the state. Unequivocally, PMTTC, coupled with the state's medical schools, has done more than any single agency or group to positively impact the number of primary care physicians practicing in non-urban settings.

In addition to the primary care needs of rural communities, access to specialty care is vital to non-urban patients in general and to rural hospitals in particular. Cardiology, radiology, pulmonology and psychiatry have been identified as some of the most pressing needs in rural hospital settings. Without these specialty services, primary care physicians are forced to send their patients to urban areas for consultation and treatment, creating instances where treatment is simply not sought by patients. It is also true that the volume of patients in any one community is not sufficient to warrant a full-time specialist. So in the face of vital but low volume specialty care needs across the state, what is the answer to protect the survival of our rural healthcare system? How can our state best provide badly needed specialty services to less populated areas in a cost effective manner? The answer is simple. Allow a specialty physician to be in two places at the same time. Telemedicine provides the technology to do just that.

### **Factors Influencing Telemedicine Applications**

Telemedicine may be defined in a variety of ways, ranging from live, real-time interaction between physician and patient to the capturing, digitizing and forwarding of patient images to a physician in another location for review at a later date. While both methods are critical to the comprehensive utilization of telemedicine, medical sub-specialties rely more heavily on the latter, store and forward description.

Over the past decade the development of digital technology has significantly altered and improved the application of telemedicine to the practice of medicine. At the onset of telemedicine in the early 1990s, the digital revolution was in its infancy, and the great majority of digital connections were characterized by lower data transmission speeds. Telemedicine applications required dedicated high speed circuits that were expensive and often unavailable in rural locations.

The prevalence of high speed internet connections and the maturing of digital technology have coupled to make today's telemedicine applications less complex and more readily adaptable to medical practitioners. Thus the single metric to determine the effectiveness of the adoption of the technology should be the number of rural patients receiving specialty care through a telemedicine mechanism.

In his work on diffusion of innovation theory, Everett Rogers describes the transformation of an innovation to practical utilization of a new technology, outlining the five most important factors influencing the rate of new technology adoption.

Those five factors are 1) relative advantage, 2) compatibility, 3) trialability, 4) observability, and 5) complexity. Each of these factors contributes to the rate at which a new technology is adopted and may be utilized to determine the rate of adoption of telemedicine technology by physicians across the state.

The factors of compatibility, trialability and observability have mostly been addressed through telemedicine projects sponsored at the university and state agency level. The acceptance of the technology is no longer the primary limiting factor to its wide spread adoption in the medical community. Of the before mentioned factors, perhaps the most strategic for our state are relative advantage and complexity. Primary care physicians and rural hospitals have now begun to recognize that the utilization of telemedicine technology creates relative advantage for the continued development of their business enterprise. The factor which continues to limit the utilization of the technology by practitioners is perceived complexity. Another related limiting factor is the failure of payers, both governmental and private, to establish reasonable rates of reimbursement for the use of telemedicine facilities.

To address the relative advantage factor, physicians practicing in non-urban settings need access to telemedicine units within their office practice to make access to specialty care timely and cost

effective for the patients. Additionally, the setup and maintenance of these units must be approached in such a manner as to reduce the perceived complexity of the telemedicine "black box."

Given these conditions, the placement and technical support of telemedicine units, the enhancement of digital infrastructure and modernization of equipment reimbursement rates must be addressed more aggressively as public policy issues.

### **Telemedicine Public Policy Issues**

The goal of increasing the number of rural physicians and hospitals utilizing telemedicine in underserved areas has received greater attention over the past decade. To that end, what measures may be undertaken to bring incremental and immediate results to this important initiative?

The map on the opposing page outlines the telemedicine and medical distance education sites currently in place within the Oklahoma State University Center for Health Sciences Telemedicine network. Additionally, sites where subspecialty care is sorely needed are identified in a projected five-year growth plan. From this document it is possible to identify points where incentives and actions may be taken to positively impact the volume of telemedicine sites and specialty service delivery.

The effort to expand and enhance the state-wide telemedicine network is a multi-faceted process, requiring the collaboration of the public and private sectors. The process will include at the minimum the following initiatives.

**1) Development of public and private funding for the purchase and placement of telemedicine units across the state.** A public funded initiative through the universities coupled with tax credits for physicians in underserved areas making telemedicine investments will provide financial incentives for the expansion of the telemedicine network. The tobacco tax pool created through the OSU Center for Health Sciences is a modest beginning in this effort; however, a much larger capital fund will be necessary.

**2) Enhancement and growth of the number of sub-specialists trained utilizing the technology.**

Utilization of enhanced reimbursement rates for physicians providing telemedicine services in underserved areas is the preferred method of developing expanded physician networks. This method provides incentives and rewards for the physicians supporting the network.

**3) Continued development of the digital infrastructure in the less densely populated areas of the state.**

In order to provide extended services, high speed internet connections must be readily available in the underserved areas of the state. Much progress has been made in this arena over the past decade, and minor tax incentive programs will provide the needed private investment to complete the remaining infrastructure work.

**4) Creation and funding of regional hubs within the four quadrants of the state to provide technical support for the telemedicine network.**

These support centers will provide technical assistance to physicians initiating telemedicine services as well as ongoing support for maintenance and service to the state-wide network.

**Conclusion**

The survival of the rural economy in Oklahoma depends largely upon our ability to sustain socioeconomic systems which promote a higher quality of life for the less densely populated areas of the state. The continued development of the healthcare system to allow patients to have immediate access to specialty care is an integral part of the economic development effort.

The utilization of telemedicine technology to provide specialty care to these areas will increase the attractiveness of the rural lifestyle and serve as an important retention strategy for underserved areas.

The enhancement of the state-wide telemedicine network will require both public and private investments as well as commitment from leaders in the legislative, business and public arenas.

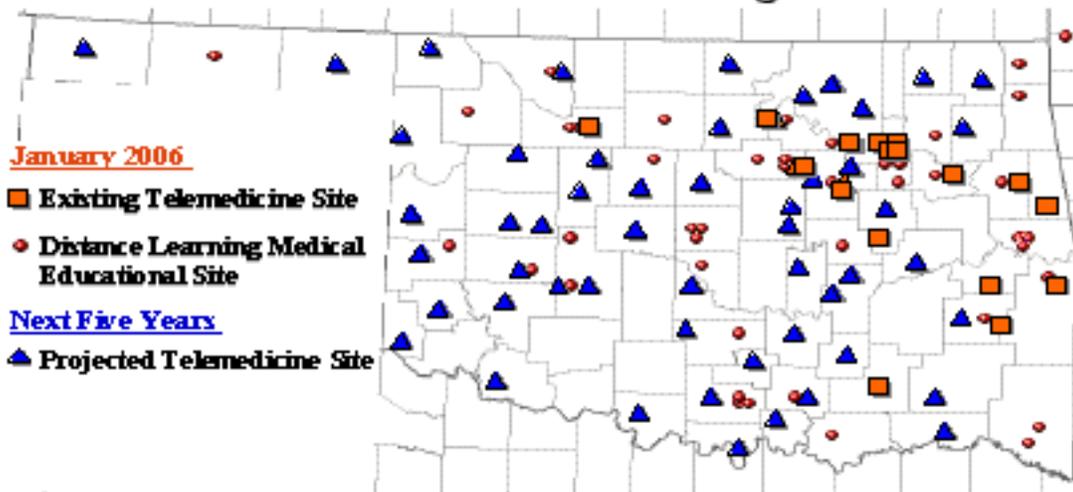
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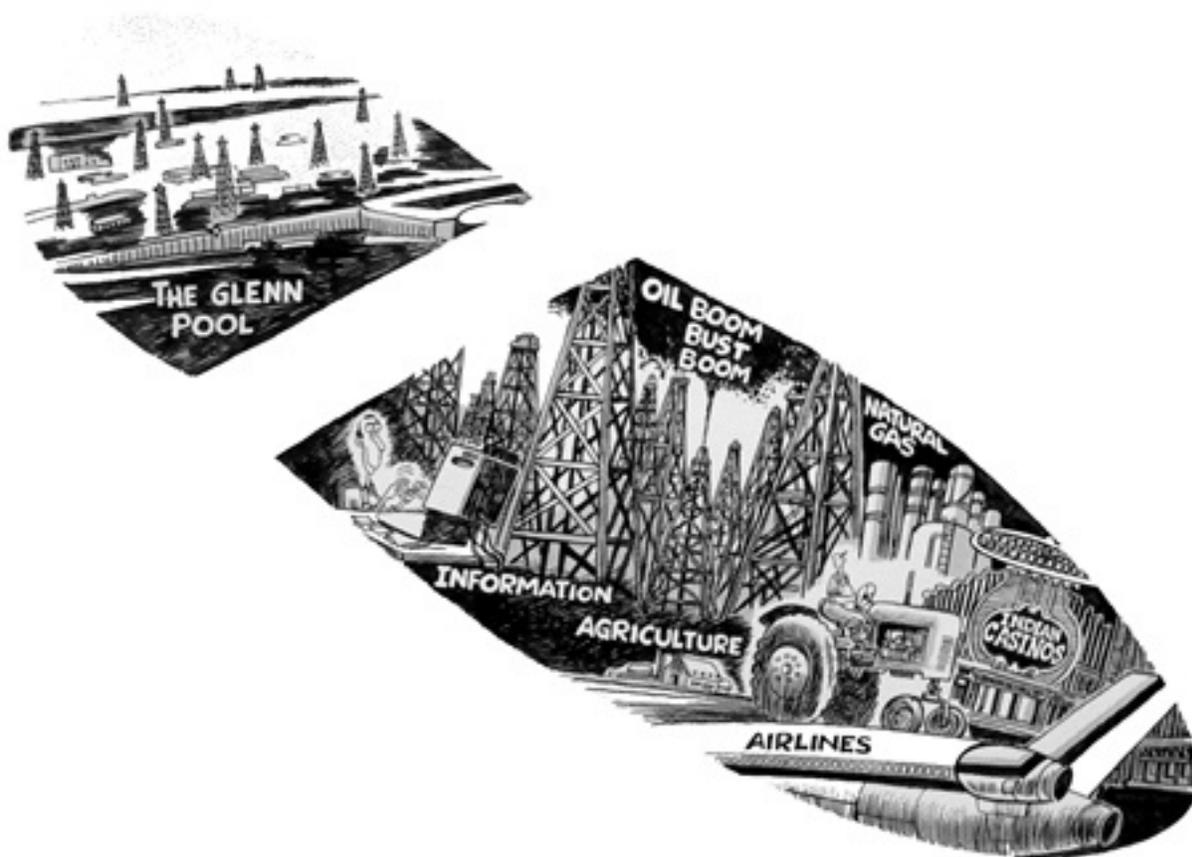
<sup>1</sup> Rogers, E., *Diffusion of Innovations*, 4<sup>th</sup> edition., The Free Press, New York, 1995

**OSU CENTER FOR HEALTH SCIENCES**



**Telemedicine and Distance Learning Network**





# *Economic Oklahoma^Footsteps*

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*Each author in this section was asked to respond to the following question.*

***“Consider the values and attitudes you see in Oklahoma. What are the challenges Oklahoma faces in meeting the high levels of economic development policies needed for an economy that will capitalize on the growth sectors of the 21st century?”***

*Each author was requested to suggest the one metric that best measures progress in this area – and explain the importance of that metric. The content is the sole responsibility (and choice) of the author as long as it was responsive to the question. The Academy did not dictate content to authors. Nor did the Academy edit content beyond grammar, punctuation and layout. This section contains those responses.*

## ***Economic Freedom + What = Prosperity?***

*Rex Pjesky, PhD, Assistant Professor of Economics  
Northeastern Oklahoma State University, Tahlequah*

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It is a very large task to contemplate what policy or policies could be enacted now that would resonate forward in time 100 years. If one considers life in Oklahoma 100 years ago one will appreciate the difficulty of designing policy to guarantee prosperity for 100 years. So, given the scope the task, this paper will outline a way of thinking about policy rather than outline specific policies.

### **Economic Growth**

Consider the problem of economic growth. What causes it? Most economists would agree that a society increases its standard of living by learning how to use its resources more effectively. In other words, society gets richer by increasing productivity—the amount of output (goods and services) that can be produced from available inputs (human, machine, and natural resources.)

This fact leads to society thinking about its problems like an engineer would think about problems. This is understandable. Increases in productivity are often technical innovations and applications of knowledge. So it has become conventional wisdom that the source of wealth is innovation and increases in technology. But is the key to economic growth as simple? Can it be true that the only necessary ingredient for prosperity is increases in technology? If so, then good policy is an engineering problem. Engineering problems are solved by purposeful human design followed by purposeful human action.

*Nearly all policymakers in the last 100 years have approached problems like engineers. The strategies for economic growth that policymakers have advanced have been centered on taxing, subsidizing or regulating things in just the right way in an attempt to force the right solution.*

But this mode of thinking misses at least half the point. Have you ever heard this one: “If we can put a man on the moon, why can’t we provide good schools for every child?” Well, putting a man on the moon is a simple application of force. It is an engineering problem. It is human design matched with human action. Point a powerful enough rocket in the right direction, and you’ll reach the moon.

Creating good schools that enable all in society to learn to read and write, however, is not an engineering problem that can be solved with the correct set of equations and powerful enough tools. A quality education system is a phenomenon that emerges from countless decisions made by countless individuals. Ensuring growth for Oklahoma is the same.

*Prosperity is a phenomenon that results from countless people making countless decisions. Prosperity cannot be achieved or encouraged as an act of will by government. Society cannot, though government, coax itself to prosperity. Prosperity is something that comes from human action, but humans cannot “design” prosperity.*

### **Prosperity Creation**

So what causes a society to be wealthy and prosperous? Economic prosperity occurs almost always and everywhere people are free to pursue a better life for themselves. This freedom is characterized by a person’s ability to own property, trade with and compete with their neighbors.

To many, the notion of “competing with neighbors” will bring up images of a vicious society where citizens are positioned against one another. The outcome is one where, like in sports,

there can only be one winner and the pursuit of victory is to defeat everyone else. But economic competition is not a zero sum game where one person's winnings must be offset by another person's losses. Indeed, in economics competition is not at all like the competition in sports. In sports competition results in only one team as champion. Everyone else loses. But in economics, competition can result in only winners.

### **Economic Freedom**

Countless studies support the idea that a high standard of living depends on economic freedom - again the ability to compete and trade freely with others. Economic freedom is correlated with nearly everything considered desirable (personal income and life expectancy among other things.)

Here is why: only with economic freedom can people use their special knowledge of time and place to solve individual problems. Only with economic freedom are people free to try to use their talents, ability and energy to invent the next new thing or to develop an improvement to an old thing that may improve the lives of the rest of us. Only with economic freedom are those who come up with products to make our lives better rewarded. This process creates winners of us all. The producer is rewarded with profits from a successful effort, and the consumer is rewarded because the products are worth the price paid.

### **Good Public Policy**

Consequently good policy would be a policy that enables responsible individuals to use their special knowledge and talents to diagnose and solve problems on the spot and placing those solutions at the mercy of the market.

Contrast this with many government policies that treat things like an

engineering dilemma. Many government solutions are, like the rocket ship to the moon, one size fits all solutions that ignore the particulars of time and place. They are solutions that are inflexible and consistently fail to meet society's expectations. And usually there are, unlike in the market place, either no or distant consequences for failure.

One size fits all is often the only way to solve simple problems. There is only one way to the moon, for instance. But there are several reasons a school may be inadequate, or people are in poverty, or why Oklahoma lags behind other states in economic development. Policymakers need to know this.

What do we need to ensure prosperity for Oklahoma for the next 100 years? Government needs to resist the urge to enforce master plans. Alternatively, government should remove barriers to individuals' drive, creativity, and knowledge. This will certainly guarantee another century of prosperity.

### **Measuring Prosperity**

How do we measure economic performance in the long run? Real (that is, adjusted for inflation) income or real wages may be obvious choices, but I don't think these measures will adequately capture what is happening to the standard of living of households over long periods of time (anything over a generation.)

For example, if you compute real wages (or real income) you might conclude workers earn 100% more now than they did 50 years ago.<sup>1</sup> But does this mean that workers are only 100% better off than they were 50 years ago? I think not. The composition, quality, and variety of our consumption change so



radically that measure of real wages or income over long periods of time severely *understates* progress.

What is needed is a qualitative measure. We can think of progress like this: What do we consider common today that would have been either wild luxuries only for the rich or even completely non-existent one, two and three generations ago?

For example, less than one generation ago cell phones were wild luxuries only the wealthy could afford. One generation ago, many people could not have even imagined that they would ever need one. But now they are common devices affordable and indispensable for everyone in the middle class and even most that are below middle class. (How many inventions can you think of that fit this description?) This is progress that cannot be captured with a quantitative measure.

If we want to assess the impact of policy specific to Oklahoma, some measure of relative per capita income should be used. When comparing Oklahoma to the rest of the United States, the issue brought up above is not a concern since composition, variety, and quality will be the same across states. In addition to relative per-capita income, relative population would be an excellent metric to use to appraise the impact of policy. The ultimate successful policy would be one that caused people to want to live in Oklahoma.

Measures that should not be used are anything relating to employment. The factors that cause unemployment and job creation are different than the factors that create a rising standard of living. (This is true in the long run. In the short run, five years or less, employment based indicators of economic well being would have some value.)

#### Notes

<sup>1</sup> These numbers are for illustrative purposes only.

## ***Ag Research***

*Michael Cawley, President, Noble Foundation  
Ardmore*

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What do we see as critical and necessary to the implementation of our strategy at The Samuel Roberts Foundation?

Our key operational strategy is to influence agriculture by exploring and improving production agriculture techniques and advancing plant science through research and discovery.

Critical and necessary to the implementation of this strategy is the funding of the \$1 billion EDGE endowment.

Why is this critical to us at the Noble Foundation? Because we feel that the best research, discovery and development in the agriculture area will be done in collaboration and partnership with other Oklahoma organizations – organizations that are very much dependent upon outside funding to staff, house and equip their research and discovery efforts.

Recruiting the best and the brightest scientific talent is extremely competitive. Many other states have appropriated the resources necessary to recruit the best and the brightest and to build and equip the finest research facilities. Oklahoma, today, as a state, is not competitive.

Recruiting becomes easier at the Noble Foundation when those being recruited realize that they are being recruited not only to a great institution, but to an institution that is part of a state whose research and discovery environment is vibrant and well supported.

## ***Oklahoma's Crude Past*** ***Making the Case for Preserving A State's Industrial Heritage***

*Brian Frehner, Ph.D., Department of History*  
*Oklahoma State University, Stillwater*

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### **Loving to Hate Oil**

I have a theory and it goes like this: Oil is a resource Americans love to hate. The oil industry as a subject of historical inquiry arouses the public's interest most often when it impacts their lives in a negative manner. Oil is a tarry, messy substance that connotes images of greenhouse gases and pollution that leaves a yellow haze over our cities. Efforts to produce and profit from oil also evoke the negative imagery of corruption and unethical profiteering. Let's face it: Much of the reason Americans tuned-in to the weekly airing of the television show *Dallas* in order to learn "Who shot J.R. Ewing?" stemmed from his unapologetic exercise of power and profit he derived from oil beneath the ground.

Americans may have just cause for their less-than-enthusiastic embrace, if not outright hatred, of the oil industry and the people who profited from it. History is ripe with examples of the industry's negative impact on our society, economy, and environment. For example, most history textbooks never fail to mention John D. Rockefeller and the business practices he exercised as head of Standard Oil Company as well as the 1911 Supreme Court anti-trust ruling breaking-up the monopoly, the Teapot Dome scandal of 1924 in which two oil promoters gave New Mexico senator Albert Fall \$400,000 in loans and bribes, the 1969 Santa Barbara oil spill, and the 1989 Exxon Valdez oil spill. These are only some of the most notable examples of the industry's negative impacts on our society but the list could be longer.

Another reason the oil industry often fails to captivate people's imaginations in a more nuanced manner is that histories about the exploration, production, transportation, refining, and marketing of a resource we consider a necessary evil do not

instantly resonate in our minds as glamorous subjects. When I tell people that I study the history of the oil industry, their eyes frequently glaze over and they force from their mouths a very un-enthusiastic: "Oh, how interesting."

### **Record Profits - A Hate Crime?**

Of course, Americans most recently despise the oil industry because of the perception that large, integrated companies are colluding to inflate gasoline prices artificially. Record profits posted by many of the largest oil companies exacerbate the industry's negative perception in the public mind.

As recently as ten days ago on the television show *Meet the Press*, executives from the largest American oil companies met to address this public relations problem. When host Tim Russert asked "Why this terrible image?," one oil executive said that much of the blame lay upon the industry itself: "I don't think we really have done a good job as an industry over many decades explaining how we explore and develop energy."<sup>1</sup> Whether we blame industry or the public, his point is well-taken: Americans know very little about the energy that makes their lives possible.

Throughout history, energy production's impact on society has been so great I would argue it has been the most important issue of the twentieth century. Recent events seem to confirm this point. Questions regarding the appropriate balance of supply and demand, impacts of production on local communities and environments, and sustainable consumption rates have dominated the media and prompted our president to declare that we are "addicted to oil." The *New York Times* reported three weeks ago former Federal Reserve Chairman Alan Greenspan's opinion that "high energy costs are beginning to stunt economic growth."<sup>2</sup>

Although Americans love to hate the oil industry, probably very few would deny the central role it has played and will continue to play in our lives, especially as energy resources grow more scarce. Given its significance, I am constantly surprised at how little Americans know about the industry and how infrequently historians have highlighted energy's importance to understanding our past



### **Heritage Preservation**

While the legacy of oil production has left a bad taste in Americans' mouths, preserving the heritage of this industry may offer an important avenue for the public to begin educating itself about energy's past, present, and future impacts on society. On one hand, there is nothing particularly novel about a call to preserve the legacy of a particular industry. Countless examples exist of museums dedicated to industries such as mining, the internal combustion engine, and, yes, even energy and oil production. We must be careful, however, of relying exclusively on museums and the industrial artifacts they house to educate ourselves about energy. Many of the earliest museums of industry presented only "stories of success and progress" designed to "encourage citizens to embrace and promote the values of a forward-looking industrial society."<sup>3</sup> What is needed when presenting industrial artifacts and the science and technology that produced them is an explanation of the societies and cultures in which these advances took place.<sup>4</sup>

Science and technology were largely outgrowths of the industrial age that spanned the nineteenth and twentieth centuries and, therefore, remain crucial to understanding the contexts in which industries evolved, a point particularly true of the oil industry. Historians outside the academy can play a particularly important role in bridging the gap between the public and its lack of understanding of the complex scientific and technological processes

driving industry. The president of the National Council on Public History recently called attention to "the enormous transformative power of science and technology and its pervasive influence in our lives" but noted the existence of "great public anxiety, suspicion, and fear" among those who fail to understand the scope and scale of these changes.<sup>5</sup> Public anxiety results when rapid change outpaces our ability to devise legal,

regulatory, political, and social responses to scientific and technological innovation.<sup>6</sup> Industrial innovation did not occur as a straight line toward the present in which ideas and machines were constantly improved upon and superseded by superior alternatives.<sup>7</sup> Rather, science and technology existed within contexts influenced by a number of factors, such as the interpersonal dynamics of a laboratory or the politics of an individual state where an industry was located. Historians preserving our industrial heritage must remain sensitive to these kinds of contexts.

### **Oil in Oklahoma**

The history of the oil industry in Oklahoma is very much a story about a specific context shaped by science, technology, and the environment. For example, as the twentieth century began, no single individual could have been better situated to shape the context in which university-educated oil prospectors operated throughout the state than Charles N. Gould. His positions as geology professor at the University of Oklahoma and director of the state's geological survey afforded him numerous opportunities to conduct venture onto the landscape, conducting fieldwork to locate and map the state's resources.

Gould frequently took students in his geology classes on field trips throughout the state, showing them how to identify geological phenomena that might correlate to oil beneath the ground. Many of Gould's students applied the knowledge they gained in the oil companies that proliferated

throughout the state, and they innovated much of the science and technology that helped the industry grow.

Gould's story constitutes only one of many involving the oil industry that unfolded in Oklahoma, but there are other stories to tell about the industrial heritage of oil production in the state and there are other ways to convey that history. Rather than building more museums, one possibility for informing the public about oil's role in shaping Oklahoma society is the designation of a national heritage area.

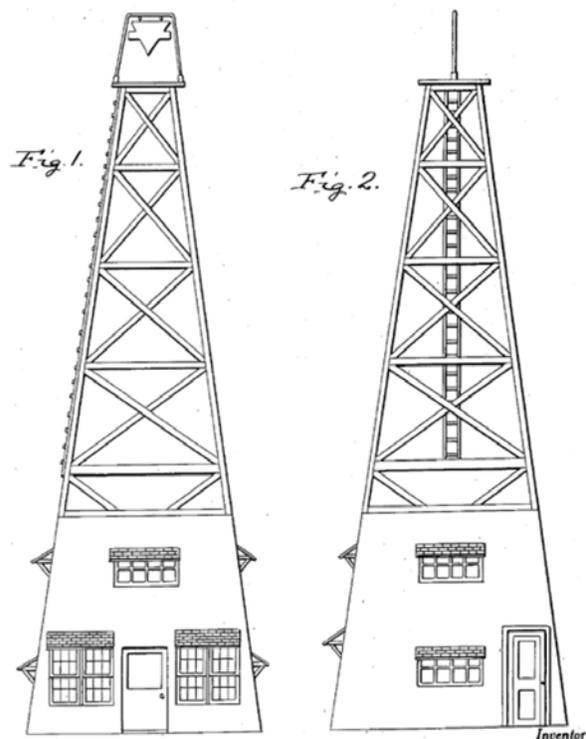
A "national heritage area" is a place designated by Congress "where natural, cultural, historic, and recreational resources form [a] distinctive landscape arising from patterns of human activity shaped by geography."<sup>8</sup> Congress has established twenty-seven National Heritage Areas in which partnerships consisting of representatives from the private sector as well as federal, state, and local governments work together to conserve, interpret, and manage the sites.<sup>9</sup>

### Best Model

The best model for Oklahoma to follow currently exists in Pennsylvania where the Oil Region National Heritage Area, designated in 2004, preserves the legacy of the petroleum industry's impact on the region's economy, society, and politics. The existence of one heritage site designed specifically to preserve the industrial heritage of oil production may suggest no more sites need be created. This argument, however, fails to consider how Oklahoma and Pennsylvania's contrasting environments provided different contexts, and thus different histories, for the industrial heritage of each state.

### NOTES

- <sup>1</sup> James Mulva, *Meet the Press*, June 18, 2006.
- <sup>2</sup> "Energy Costs May Stunt Economy, Greenspan Says," *New York Times*, June 7, 2006
- <sup>3</sup> Sharon Babaian, "A Larger Reading of the Human Past," *The Public Historian*, 27/3 (Spring 2005), 16.
- <sup>4</sup> *Ibid.*, 17.
- <sup>5</sup> *Ibid.*, 15.
- <sup>6</sup> *Ibid.*
- <sup>7</sup> *Ibid.*, 16
- <sup>8</sup> National Heritage Areas, <http://www.cr.pns.gov/heritageareas/FAQ/INDEX.HTM>
- <sup>9</sup> National Heritage Areas, <http://www.cr.pns.gov/heritageareas/>



## ***Economic Development & Chickasaw Nation***

*Brian Campbell, CEO, Chickasaw Enterprises*

*Ada*

Oklahoma's economic history has been marked by periods of both feast and famine. It is no coincidence that these periods have generally followed trends in the agriculture and petroleum markets. Throughout the last century Oklahoma's economy has been largely dependant upon the agriculture, petroleum and manufacturing industries.

Critics contend that Oklahoma's continued dependence on these traditional industries has hampered the state's economic development. They maintain that while many states are looking to bring in growth industries in the knowledge, technology and service sectors to capitalize on the enormous opportunities available in the emerging global marketplace, Oklahoma continually expends a disproportionate amount of resources on attempts to support traditional industries which offer little promise for growth. The recent loss of the General Motors manufacturing facility in Oklahoma City seems to suggest that there is at least some validity to their assertions.

This is not to say that the industries that have long sustained Oklahoma should not be supported. To the contrary, the agriculture, petroleum and manufacturing industries will always play an important role in the state's economy. However, these sectors offer little potential for meeting the state's need for new and better-paying jobs. Thus, it stands to reason that more focus and resources must be directed to developing growth opportunities in other areas.

The continuing emergence of the global marketplace has fostered nearly boundless economic opportunity. The greatest challenge facing Oklahoma's leaders in the 21<sup>st</sup> century is to recognize the opportunities that exist for



Oklahoma in this new frontier, and develop a comprehensive long term plan to take advantage of those opportunities.

Bringing industry into the state is a fine goal, but having a plan that focuses on long term success means more than simply bringing jobs and investment into the state. It means

looking for industry that can bring the right kinds of jobs and investment; the kind that offer meaningful long term benefits. The focus should be on attracting industry that not only meets the state's current needs, but that also has potential for growth well into the future. The areas that have shown the most potential in this regard are knowledge, technology and service-related industries. These growth sectors should receive the most consideration when developing any long term economic growth strategy.

Once the types of industry that should be targeted have been determined, the next important piece of Oklahoma's economic development plan must be to consider how to most effectively market the state to companies within those categories that may have an interest in locating all or part of their operations in Oklahoma. The marketing strategy must focus on the strengths that already exist for Oklahoma that may be of interest to prospective companies. For example, Oklahoma's central location makes it attractive for obvious logistical reasons. Oklahoma's airport and interstate and commercial railway access make the state a convenient shipping hub. The state's central location also makes it an ideal location for secure data centers; both for the military and private industry alike.

Another advantage that Oklahoma has over many other states is a relatively low cost of living. Many

companies would appreciate the inexpensive real estate market. They may also find it easier to recruit young and talented professionals into areas where the cost of living is lower. This is because many such recruits who are educated in the traditional knowledge and technology centers near the coasts prefer to move to locations where they can live better on their entry-level salaries.

Apart from marketing strengths that already exist, Oklahoma must also look to develop programs that could make the state more marketable to established growth companies and entrepreneurs alike. One approach is to offer economic incentives. The possibilities for incentives are virtually endless. They can include various forms of tax relief, or capital assistance for start-up costs, construction or purchasing land. Programs that might be especially helpful for encouraging the start-up new businesses might include services like assistance with developing business plans and help with building local customer bases.

One strategy for encouraging entrepreneurs in the knowledge and technology industries that has proven successful in other parts of the world is the science and technology park concept. These facilities or campuses are typically constructed near universities and may be constructed with public, private or a combination of funds. They generally provide a wide range of technical and business assistance to promising entrepreneurs who would otherwise lack the resources necessary to develop and market their ideas.

Oklahoma's plan for economic development should also consider tribal resources available within the state. Oklahoma Indian tribes are just as interested in seeing the state's economy prosper as other residents. Arrangements between tribes and the state could be particularly effective for promoting economic development at the regional level. One example of how this could work might be to establish regional economic development councils consisting of state, municipal and tribal leaders. These councils could help recognize and develop economic opportunities within their respective regions.

Of course, in order to achieve meaningful long term success, Oklahoma's strategy must include plans to improve and enhance the state's education system to produce a better educated, highly skilled workforce.

More emphasis must be placed on technology-related disciplines at all education levels. It is essential that students leave high school with solid skill sets in math, science and computing to lay an adequate foundation for success in demanding science- and technology-related programs at the college level. The state must also work to get more technology in the hands of high school and college students. Many rural high schools and regional colleges and universities do not have adequate resources to maintain up-to-date equipment and software.

Business education is another important area where additional emphasis could be placed in Oklahoma schools. The entrepreneurial spirit can be instilled in many of the state's young people by introducing them to basic economic principles at an earlier age. This spirit can be nurtured and developed as they get older by introducing children to basic business planning and marketing principles. Additionally, entrepreneur camps and programs could be offered at the junior high and high school levels to motivate young people and give them the skills and confidence to perhaps build their own business one day.

Oklahoma has tremendous potential to take advantage of the growth opportunities available in the emerging global economy. By establishing a clear vision and implementing a comprehensive long-term economic development plan, Oklahoma can position itself to take full advantage of those opportunities. An effective means of measuring the success of Oklahoma's economic development plan would be to periodically measure the percentage of the state's GDP derived from growth industries in the knowledge, technology and service sectors. This metric would provide a good indication of whether Oklahoma is developing the kind of economy that can meet the state's needs in its next century of statehood.

## ***Chickasaw Businesses***

*Bedre Chocolates: Bedre makes fine chocolates. Its largest customer is Nieman- Marcus. (right)*

*KADA Radio: Bought in 1994, KADA AM & FM are the only stations licensed to Ada, broadcasting music and sports programming. (Cool 99.3 FM at right.)*

*Travel plazas: The tribe owns plazas in Ada, Davis, Kingston, Paoli, Thackerville and Wilson.*

*Tobacco stores: The tribe owns stores in Ada, Ardmore, Madill, Marlow, Norman and Tishomingo.*

*Gaming centers: The Chickasaw Nation has centers in Ada, Ardmore, Davis, Duncan, Kingston, Madill, New castle, Norman, Paoli, Thackerville and Wilson.*

*Bank2: The former Chickasaw Bank Holding Co. was formed in March 2001. (lower right)*

*Artesian Hotel: The Chickasaws have planned a hotel on the site of the former Chickasaw Lodge.*

*McSwain Theater: The 1920s theater is under renovation. Renovation plans include restoring the facade and interior and putting in seating for 525. (see at right).*

*Community Garden: The Chickasaw Nation Horticulture Department was created in March 2002 to sell cut flowers, fresh vegetable, hanging baskets and landscaping services.*

*Chickasaw Nation Industries: This is a federally chartered tribal business corporation to promote economic development. Its assets include an 80,000-square-foot manufacturing plant in Marietta. Its products include airport baggage conveyor systems and mail carts.*

*Source: [www.chickasaw.net](http://www.chickasaw.net); Daily Oklahoman July 13, 2006*



WHOLLY OWNED BY  
THE CHICKASAW NATION

## ***Government Services and Fiscal Responsibility***

*David Blatt, Coordinator, Alliance for Oklahoma's Future  
Tulsa*

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The last two legislative sessions have made clear that, consciously or unconsciously, Oklahoma policymakers are engaged in a fierce battle over the importance of government services to the future of Oklahoma. While Oklahoma's ability to create opportunity, security and well-being for all its citizens is tied to the preservation of strong and effective government services, its capacities to assume its responsibilities are threatened by current fiscal policies and long-term fiscal trends.



Oklahoma more competitive compared to other states and forces individuals to be more responsible for their own well-being.

By contrast, our view is that a *properly-funded* and *effective* public sector will continue to be essential for our economy and society in the years ahead. State and local governments need adequate resources to be able to serve as partners with the private

sector, communities, and non-profit organizations in accomplishing goals that promote the common interests of Oklahomans and to assume those tasks that cannot be left to private companies and individuals alone. The key roles of state and local government include:

- Promoting economic development by investing in a functioning public infrastructure system, a well-educated and well-trained workforce, and a clean environment;
- Maintaining economic fairness by enforcing regulatory standards that protect workers, consumers and businesses;
- Preserving public safety and public health, whether by providing police protection and conducting restaurant safety inspections in normal times or by taking the lead in responding to emergencies such as terrorist threats, droughts and outbreaks of disease;
- Ensuring opportunities for personal advancement and prosperity for all by maintaining access to an affordable public education system, including higher education for those with the ability and inclination;

Fueled by the state's booming energy sector, lawmakers over the past two legislative sessions have been able to divvy up the spoils of unprecedented budget surpluses. But while politicians from both parties have used these surpluses to increase spending in response to the greatest needs and loudest demands, a major faction has been engaged in an attack on the long-term fiscal capacities of the state government.

The twin weapons of this attack have been enactment of permanent tax cuts, particularly cuts to the state's most dynamic and progressive revenue source, the income tax, and promotion of rigid and constitutionally-entrenched spending limits to constrain state spending. While the success of the latter effort remains to be seen, the magnitude of the tax cuts passed the past two sessions, which total in excess of \$700 million when fully implemented, will substantially limit the availability of revenues to fund state services in the years ahead.

For the most fervent proponents of tax cuts, shrinking government is of benefit because it frees up more resources for the private sector, makes

- Preserving a basic level of health and well-being for all citizens by providing services and assistance to those with chronic or temporary needs.

Looking ahead, the price tag of fulfilling government's roles can be expected to rise as the demands of a high-tech, globally competitive economy make public investment in education, training and infrastructure more vital and as the aging of the population puts new and added strains on our publicly-funded health care and retirement systems. State and local governments can be expected to shoulder more of this overall burden as the federal government, saddled by its own monumental fiscal problems, tightens the purse strings.

Yet even without the actions of recent legislatures to downsize the tax base, our state and local tax systems are poorly-designed to meet our fiscal challenges. The sales tax, focused on the sale of goods, captures less and less of an economy shifting to services and remote sales over the Internet. The corporate income tax has been eroded by sophisticated income-shifting techniques. The income and property tax codes are riddled with a growing and bewildering array of tax preferences and incentives that exempts an increasing share of economic activity from taxation while skewing the functioning of the competitive market. The legislature has been especially generous in granting significant tax exemptions to the population that is growing most rapidly – seniors.

The consequence of growing budgetary needs and an inadequate revenue system can be labeled a “fiscal gap” or a “structural deficit”. Professor Kent W. Olson recently concluded that “Oklahoma’s state expenditures are currently designed to eventually grow much faster than state revenues, resulting in a significant fiscal gap”. A study by the Rockefeller Institute of Government projected a fiscal deficit of 4.3% compared to

baseline revenues within eight years. These studies, and others sounding the alarm of structural deficits, were conducted prior to the recent rounds of deep tax cuts and increased spending commitments.

Part of the problem lies with the budget process itself. Our current system of building the state budget one year at a time, devoid of any projections or forecasting of longer-term revenue trends and funding needs, is particularly ill-suited to steering a fiscally responsible course. Spending increases and tax cuts are approved so long as they can be squeezed within the upcoming 12-month budget framework, regardless of their longer term impact. Responding to temporary good times by approving massive and irreversible tax cuts is one example of this shortsightedness, but so was dedicating a flat or declining revenue source, the tobacco tax, to fund new obligations in the most rapidly rising sector of the state budget, health care.

In this context, we face a real risk of chronic and escalating underfunding of public services that may lead, gradually or abruptly, to a serious breakdown in government's ability to serve those roles we expect it to serve. To avert this steady erosion, we need to take action in a purposeful and non-partisan way to identify what it is we expect our government to do, calculate what it will cost to fulfill these expectations properly and efficiently, and decide how we as a society are prepared to pay the costs.

***The Alliance for Oklahoma's Future** is a non-partisan, broad-based alliance of organizations and individuals who have pledged to work together to educate their respective members, policymakers, and the public about tax and budget issues and the need for policies that ensure adequate investment in public services in Oklahoma. For more information, visit [www.okbudgetalliance.org](http://www.okbudgetalliance.org) or email [info@okbudgetalliance.org](mailto:info@okbudgetalliance.org)*

## *Economic Development and Durant*

*Paul S. Buntz, Durant City Manager  
and Tommy Kramer, Executive Director, Durant Industrial Authority*

Oklahoma has many assets that make our state a good location for new and expanding industry. We enjoy a work force with a strong work ethic, abundant natural resources including a relatively abundant water supply, low tax rates, one of the nation's best vocational education systems, a strategic location near the nation's geographic center, and a strong state economic development program with attractive incentives. As we assess our readiness as a state to capitalize on the growth sectors of the 21<sup>st</sup> century, what policy challenges do we as a state face to move our economy forward?

1. *Transportation.* Having worked with numerous economic development prospects over the past eight years, nothing is more important to new and expanding industry than location relative to the transportation infrastructure. Oklahoma's highway construction funding has not been adequate and must be increased to maintain and improve our highway infrastructure.

Rail and the availability of convenient airlines service is another important factor desired by industry. Southern areas of the state close to the Dallas-Fort Worth Airport enjoy a significant advantage over other rural areas of the state.

The City of Durant has been involved in six railroad spur extensions in the last two years.



It has been our experience that dealing with railroads on an expedited basis is a challenge that needs to be addressed because of the critical aspect of railroad spurs to industries requiring rail access to Class 1 Carriers.

Also, a program for rail spur extensions similar to the Oklahoma

Department of Transportation industrial access road program would be of great assistance to expanding industry in both rural and urban areas.

2. *Workers Compensation.* The adversarial, dueling doctors model of workers compensation is a disadvantage to corporations comparing our state to others to systems more focused on efficiently treating and compensating those workers who really are injured.
3. *Economic Development* is local. No matter how much expertise the Oklahoma Department of Commerce possesses, it is that local economic development team that is vital to making the deal. Because of competition for the same prospects, there is often a dearth of regional cooperation. The challenge is to support and strengthen the local economic development teams based on proven models of success.
4. *Taxation.* Oklahoma enjoys low ad valorem tax rates but individual income tax rates compared to states such as Texas with no state

income tax is a clear disadvantage to companies considering both states for a new location. Comparative income tax rates are even more important for corporate headquarters facilities and those whose employees will be paid a relatively high income. As Oklahoma continues to lag the state and region in per capita income, this remains a significant challenge.

5. *Regional Workforce Strategic Planning.* In addition to location and transportation, available workforce is at the top of the list for new and expanding industry. The Durant Industrial Authority has joined with Workforce Texoma in Texas to develop a regional workforce strategic plan to assess the available skills of the work force and the number of applicants new and expanding industries can expect to apply for available jobs. Workforce Oklahoma and the Oklahoma Department of Career and Technical Education do an outstanding job and are critical to new job creation. Oklahoma should continue to place a high priority on maintaining these programs.
6. *Community Pride and Beautification.* Corporate executives and industrial recruiters will often bypass communities that have high levels of litter, trash and debris, and exhibit a lack of community pride. In Durant, we don't think it was coincidental that economic development started flourishing after community beautification efforts were initiated. Our challenge is to educate Oklahoma citizens on the link between community appearance and economic development.
7. *Water Resources.* All too often water resource planning is done on the community level instead of regionally. Sometimes this results in duplication of infrastructure and added operational cost. The City of Durant and a local water district utilize water from the same water source (Blue River), have intake structures side by side, and have separate water

treatment plants a couple of miles apart with separate staffing for each plant. By approaching water supply on a regional basis, the cost of water supply development and operation could be significantly reduced. The challenge to our state is to encourage water supply planning and development at the regional level and not solely at the local level.

8. *Water Distribution.* Oklahoma is fortunate to have a network of rural water districts to serve the rural areas of our state. Many of these districts simply do not have the infrastructure to serve large industrial and commercial facilities. The challenge to the state is to establish a legal mechanism to allow for cities that are growing into areas served by rural water districts to be able to acquire portions of those rural water systems that are located within the city limits of Oklahoma cities and towns. There currently is no statutory procedure to accomplish this.
9. *Incentives.* The Oklahoma Quality Jobs Program has been instrumental in attracting new and expanding industry to our state. It is also very efficient by paying for performance. Industries are compensated only to the extent that the projected jobs have actually been created and that the jobs are still in place over a ten year period. In the future, the legislature should evaluate the success of this program and continue to provide adequate funding for this program and look at ways of expanding the program to target higher wage jobs for our state. The CDBG-ED program has also been a cornerstone of job creation in our state and should be funded at sufficient levels to meet the infrastructure demands of new and expanding industry. Tax increment financing is also a valuable tool in meeting the infrastructure needs of new and expanding industry with high capital investment. The Small Quality Jobs Program of the Oklahoma Department of Commerce is a good program in concept but is difficult to implement in rural areas of the state. The requirement that 15

jobs be created in the first year is too steep a threshold for many start-up companies. It is suggested that consideration be given to allow a two to three year period to achieve the 15 new employee threshold which would allow many more new start-up companies to take advantage of this incentive.

10. *Annexation laws.* Annexation is not usually associated with economic development, but recent trends in state legislation have sharply restricted the ability of cities in Oklahoma from expanding their boundaries by sharply curtailing strip annexation. Many of the best industrial sites throughout the state are located outside the political boundaries of Oklahoma cities due the need to have rail and highway access. It was necessary for the City of Durant to annex a site with rail access for an industrial facility with an investment of over \$100,000,000. The company had already rejected all existing sites inside the city. Under current annexation laws, it is likely the city would not be able to accomplish the annexation in a timetable to meet the company's schedule and it is likely that the company would have looked elsewhere for their new plant. The legislation should relax the current annexation statutes to allow cities to strip annex to an industrial site in an expeditious manner. The legislature should also consider combining cities and towns under the same annexation laws. The annexation procedure for towns is much less restrictive than annexation laws that apply to cities.

It is difficult to determine one metric or statistical measurement to gauge economic progress in Oklahoma. Oklahoma traditionally enjoys unemployment rates lower than the national average. The one area that Oklahoma has traditionally lagged the nation is in per capita income. The most important measurement of economic progress is for our state to work to increase the per capita income of Oklahomans to meet or exceed the average per capita income of American citizens.

## ***Regional Partnerships***

*Craig Knutson, Academy Research Coordinator*

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The Kansas City Federal Reserve (see article by Sarah Low on entrepreneurial potential is in this document) recently released an article in their publication "The Main Street Economist" entitled Innovative Regional Partnerships in the Rural Tenth District. While Roy Williams' article highlights the advantages and successes of an urban regional partnership, this article "describes how effective regional partnerships can help rural areas overcome the disadvantages of size and remoteness."

The numbers are dauntingly bleak from a rural perspective. The article reminds the reader that between 1990-2000, the top 10% of U.S. counties (using employment, income, and population growth) "accounted for roughly 75% of each of these national assets." Rural, non-metro counties accounted for less than 3% of the high-growth counties, despite representing almost two-thirds of ALL U.S. counties! But research shows there are rural economic success stories, due to collaborations among communities within a geographic area.

The authors focus on how a rural area can overcome the lack of agglomeration, that is the "advantage that emerges from clusters of people and similar firms in close proximity." What can rural areas do to minimize the geographic reality remoteness? Develop regional partnerships that create synergy from a united partnership without destroying the individuality of the partners' communities. Essentially, the "sum of the whole partnership" is much stronger and more effective than the "sum of the individual communities." Sounds logical, has proven to be effective . . . but not very often.

While only one community is actually cited (Farmington, New Mexico), the article's references reflect the success of a several locations, especially those rural areas that are adjacent to metro areas. That adjacency has created many "spillovers," from labor markets and retail taxes to "knowledge spillovers," a direct result of improved broadband communications expansions. Oklahoma ranks near the top in terms of broadband expansion in rural areas. I'd highly recommend that policy makers from across the state read this article; for rural areas to compete (Ardmore – MG), innovative partnerships are indispensable.

## *The Future of Agriculture*

*Terry Detrick, Vice President, Oklahoma Farmers Union  
Oklahoma City*

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*The farmer and the cowman should be friends,  
Oh, the farmer and the cowman should be friends.  
One man likes to push a plough, the other likes to chase a cow,  
But that's no reason why they can't be friends.*



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Today, we have just experienced the driest crop year on record and the poorest crop production in fifty years. Yet, there has been no 'dust bowl' and our natural resources have survived intact.

Looking ahead I see three major points of emphasis facing the agricultural community ...  
**FOOD, FUEL, WATER.**

**FOOD** - Biotechnology will revolutionize the food production industry. There will be genetic enhancement for increased nutrition, drought, disease, and pest resistance thus eliminating much of the need for petro chemicals as crop protection products. There will be an emphasis on the use of crops that will not only provide better nutrition but perform other tasks such as sequestering carbons from the air, capturing nitrogen from nature, and have natural pharmaceutical characteristics.

Another area of future food production involves the beef and dairy livestock industry. We are likely to see patents on genetics that enhance the production of uniform, specific quality animals with improved growth and gain. Through a mandatory animal identification system, not only will we have traceback ability of each animal for animal health and food safety, we will also have the ability to trace the performance and market the genetics that provide product excellence.

Transportation of food commodities will likely be reformed also. A more economically feasible method of only transporting the necessary and needed components of a commodity rather than the whole commodity will be more widespread.

**FUEL** - We will never run out of oil, only at affordable prices. As our bankroll of petroleum continues to diminish, we will develop more technology to utilize renewable sources of energy. Crops will be used to capture naturally the energy from the sun and soil to be transformed into usable types of energy for fuel.

Large-scale crop production will focus on energy crops. Corn, sorghum, hull-less barley, and other high carbohydrate grains will be the dominant drivers for energy production by the fermentation process. The cellulosic or lignin biomass energy conversion will move ahead at a much slower pace and should be fully developed after several more years of research. More and more land will be converted to these carbohydrate crops in the next 25-50 years with lignin biomass being produced on more marginal lands.

Some of the most significant changes will be in the replacement of diesel by renewable oils. Oil refining companies will rearrange the carbon and hydrogen atoms to produce bio-based fuels more

efficiently. Soybeans are positioned to be the price driver for all other oilseeds. For livestock feed, lower input cost crops will replace soybeans which will evolve from their primary use as cattle feed to renewable diesel and polymers for plastics. Improved efficiency of extraction will be the key for determining oilseed demand.

Cottonseeds with 16% oil, soybeans with 24% oil, canola and sunflowers with 38-40% oil and peanuts with up to 60% oil will become key economic drivers for Oklahoma agriculture.

Animal fats will also be a part of satisfying this renewable diesel appetite. Research performed by our Land Grant Universities will heavily influence our future. Agriculture will adapt quickly to the growing trend of producing genetically modified crops designed for specific purposes.

To keep their share of the profit at the farm gate, farmers will perfect their marketing techniques, hire the necessary expertise, and invest in value-added ventures.

As a result of the coming evolution in agriculture production, unless the value of the energy produced from crops that would otherwise be exported exceeds the value of the crop as an export, our trade deficit will increase and generate more red ink for the U.S. in global trade.

As fuel competes with food for production acres, diets will adapt and cropping technology will do likewise. The value of land for food and energy production and recreation will likely discourage the current practice of urban sprawl and, along with the price of fuel, encourage more condominium and high-rise apartment residences.

Oklahoma has the potential to produce energy for this nation from Oil, Natural Gas, Coal, Wind, Hydro, Solar, and Cultivated Acres. Mature landfills will be a source of methane gas. The fact



that Oklahoma's wide open spaces have attracted garbage waste disposal from cities outside our state can eventually be an asset as we harvest methane gas from the mature landfills.

**Water** - Private property rights and the ownership of water will become a major, major issue. Which waters will be owned by the public, private, or tribal interests? What effect will the irrigation practices in northwest Oklahoma have on the spring-fed streams in southeast Oklahoma?

As food and energy production compete for available water, genetically enhanced, drought resistant crops coupled with improved irrigation practices will emerge. Less water for agriculture will allow more to be available for recreation and municipal uses. More opportunities to recycle and conserve water will be discovered and practiced. A big question to be answered in the future is whether or not there is excess water and will it be allowed to be sold and if so, to whom and by whom?

If Oklahoma does not use its human capital and other assets of coal, oil, natural gas, clean air, clean water, cultivated acres, ranch land and other natural resources to emerge as a major provider of food and energy, it will be because we failed to plan.

## ***Gauging Rural Oklahoma's Entrepreneurial Potential***

*Sarah A. Low, Center for the Study of Rural America*

*Federal Reserve Bank of Kansas City*

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Economic assets such as cheap land and labor have traditionally been foundations for a region's economy. But these assets can no longer ensure regional prosperity in a rapidly globalizing economy. Assets such as workforce, natural amenities, innovation, and entrepreneurship will shape economic prospects in today's globalizing environment.

Entrepreneurs are innovative users of regional assets—and entrepreneurs create local jobs, wealth, and growth. Scholars and economic development practitioners are increasingly recognizing entrepreneurship as an important rural economic development strategy, but measuring entrepreneurship is particularly difficult in rural areas due to the difficulty in obtaining data - making rural economic development strategies difficult to implement.

This article begins by discussing why entrepreneurs are vital components of regional economic development. Second, we develop measures of entrepreneurship in Oklahoma. Finally, we examine policy implications for rural entrepreneurship.

### **Why Does Entrepreneurship Matter?**

Entrepreneurship is important to a regional economy because it bolsters quality of life while promoting economic prosperity. Research finds a strong correlation between entrepreneurship and long-term regional employment growth.<sup>1</sup>

The type of entrepreneurship in a region's economy is also important. Some entrepreneurial firms benefit their community by enhancing the local quality of life and providing goods and services to the local market. Other firms generate significant economic growth through added jobs and investment.

Some small-scale entrepreneurs start new firms primarily to support a desired lifestyle. Such businesspersons enhance the quality of life in a region through the ambiance they create and the services they provide. Restaurants, hardware stores, and local grocers cater to local residents—these small entrepreneurs help make communities work. They are a large part of the seedbed for small-business ownership, which is the foundation of an entrepreneurial region.

These entrepreneurs add - *breadth* to regional entrepreneurship. Other entrepreneurs specifically target growth. By employing local labor and new technologies, these entrepreneurs contribute considerably to a region's economic prosperity. The results can be new regional wealth and a higher tax base. Such entrepreneurs bring a competitive advantage to rural regions by identifying and exploiting regional assets. Some firms, universities, and private inventors generate patents, which can be an important measure of a region's innovativeness.

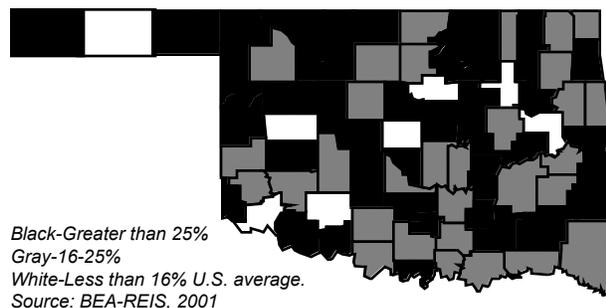
The economic contribution of such entrepreneurs is indicative of the *depth* or value of entrepreneurship in a region.

Both *breadth* and *depth* are important components of regional entrepreneurship, local quality of life, and rural prosperity. Simply put, entrepreneurship breadth is the widespread dispersion of entrepreneurs, while entrepreneurship depth is the concentration of high value entrepreneurs.

### **Entrepreneurship Breadth: Oklahoma's Seedbed of Entrepreneurship**

A region rich in entrepreneurship breadth contains many different kinds of entrepreneurs. While no indicator can determine perfectly the breadth of entrepreneurship, the ratio of self-employed to total employment sheds light on the breadth of entrepreneurial seedbeds.

Figure 1  
Breadth of Entrepreneurship



The breadth of entrepreneurship is particularly high in rural counties throughout the United States, including much of rural Oklahoma (Figure 1). White counties in the map average less than 16 percent proprietorship, the national average for counties. Gray counties have shares ranging from average to 25 percent. Black counties have the highest level of breadth - over 25% of the labor force.

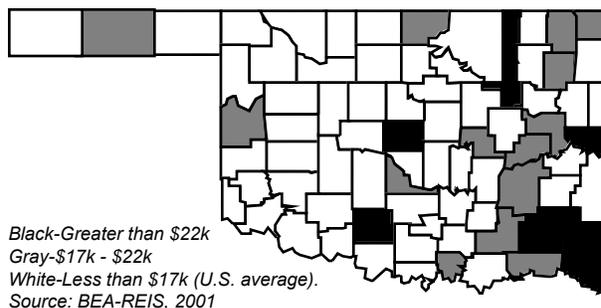
The map clearly shows entrepreneurship is broader in Oklahoma than the United States. In fact, the average breadth of entrepreneurship in non-metro Oklahoma is 25%. This high percentage underscores the importance of entrepreneurship to rural economies. However, entrepreneurship breadth alone is not sufficient for rural prosperity.

**Entrepreneurship Depth:  
A Valuable Asset for Oklahoma Regions**

While many small entrepreneurs enhance a region's quality of life, high depth entrepreneurs fuel economic growth. We gauge the depth of entrepreneurship by examining the value created by proprietors in a region. High-value entrepreneurs earn more income, create more value, and enhance regional growth and prosperity more than other entrepreneurs.

Entrepreneurship depth differs from entrepreneurship breadth in that it examines the value of entrepreneurial activities, rather than the number of entrepreneurs. Entrepreneurship depth can be measured both in terms of income and value added.

Figure 2  
Depth of Entrepreneurship  
Average Proprietor Income



*Income*  
A regions' average income is important because, as it rises, the region as a whole becomes more prosperous. We refer to the ratio of proprietor income to the number of proprietors in a county as average proprietor *income*. Clusters of high income entrepreneurs appear in metropolitan areas throughout the United States—consistent with the notion that most high-value entrepreneurial growth occurs in densely populated areas. Indeed, rural Oklahoma proprietors earn \$4,600 less than urban proprietors on average.

Figure 2 shows Tulsa and Oklahoma City have high average proprietor income.<sup>2</sup> However, a few non-metro counties in Oklahoma have high levels of entrepreneurship depth income. Washington and Stephens counties may be set apart due to significant corporate presences, which increase the number of researchers, lawyers, consultants and various support professionals who are typically high-income proprietors and/or create high-value patents (Figure 3).<sup>3</sup> The high levels of entrepreneurship in Pushmataha County may be due to the county's small population, creating "entrepreneurship by necessity," where there are few wage and salary job opportunities.

*Value Added*  
High levels of value added indicate that a region's entrepreneurs are creating more value through their activities and, consequently, are helping the region prosper. The share of proprietor income to self-employment receipts is a useful approximation of

Figure 3  
Patents Per Capita  
Average over 1995-99

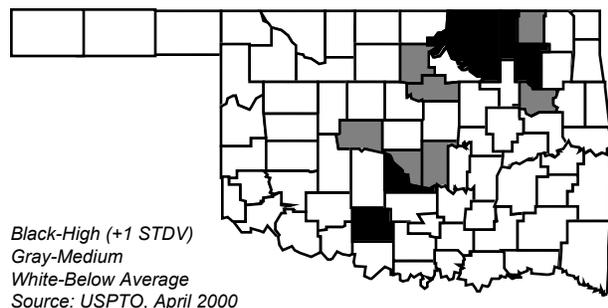
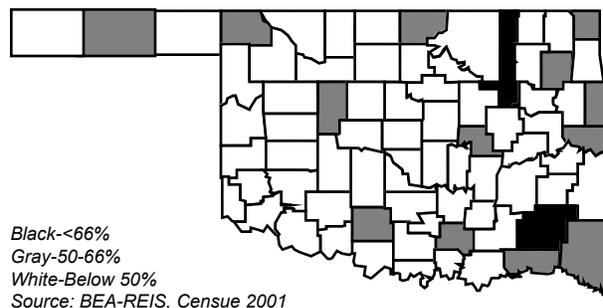


Figure 4  
Depth of Entrepreneurship  
Value Added



this entrepreneurial value-added, which is itself more revealing than the income metric. Value added is a direct measure of the proprietor's contribution to the product or service provided to the market. Value added is also a better measure of depth than average income because the relative contribution of part-time and full-time proprietors can be measured with the same yardstick.

Metropolitan counties nationwide have higher entrepreneurship value added. Tulsa and Oklahoma City metro areas are no exception. Pushmataha County is also high in value added, possibly for reasons discussed above. Figure 4 shows White counties have below average proprietorship income to receipt ratios - 1/2 or less, Gray counties have ratios between 1/2 and 2/3, and Black counties have value-added ratios of 2/3 or more. In short, rural areas seem to be lagging in entrepreneurial depth, and consequently their prosperity is hindered.

### Policy Implications for Oklahoma Entrepreneurship

Entrepreneurship is a crucial component to shaping the future of regional economic development. Entrepreneurship creates jobs and wealth within a region, ultimately leading to prosperity. While entrepreneurship is scattered throughout rural areas, we find entrepreneurship depth, which creates most economic benefits, is highest in metropolitan areas. Entrepreneurs in urban centers may particularly benefit from the proximity to urban high-value marketplaces.

Still, rural regions seem to be a natural seedbed for entrepreneurship. The breadth measure shows that a high proportion of rural workers are self-employed. Seedbeds seem to occur easily in areas with sparse economic activity, creating opportunities to fill local needs with small establishments.

These entrepreneurship metrics suggest that connections to dense urban markets, such as through high-quality telecommunications, highways, business networks, and other links, are critical to fostering high-value entrepreneurship in rural Oklahoma. Business assistance programs, which bolster the management capacities of a budding firm, may also be important to spurring more entrepreneurial successes in rural regions. Regional leaders can use these entrepreneurship metrics to gauge how high-value entrepreneurs could become part of a regional development strategy that could include further partnering with other areas.

### Notes

- <sup>1</sup> Acs, Zoltan and Catherine Armington. *Endogenous Growth and Entrepreneurial Activities in Cities*, U.S. Bureau of the Census, 2003.
- <sup>2</sup> White areas represent counties with below average proprietor income: gray counties have above average proprietor income, and black counties have the highest proprietor income.
- <sup>3</sup> I extend special thanks for assistance to Michael Reidy, Innovation Center, Rogers State University.

## *Whither Venture Capital in a Flyover State?*

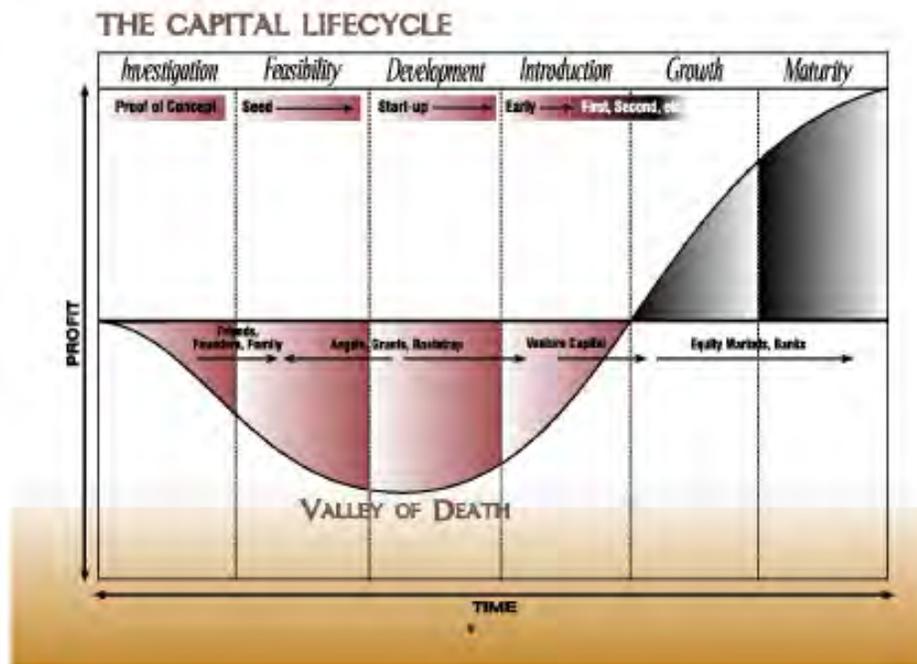
*Greg Main, President and CEO, i2E, Inc.  
Oklahoma City*

One of the hallmarks of prosperous economies is the presence of venture capital in sufficient quantity to fund new business activities. Venture capital comes in a variety of forms and is deployed by angel investors (high net worth individuals who invest their own funds) or professionals who invest capital raised from pension funds, endowments, corporations and individuals usually in a limited partnership arrangement.

It is the premise herein that for Oklahoma to become more prosperous, it must attract capital to fund the transition from a commodity based economy to a knowledge based economy. It is a further premise that we even though we

demonstrated an ability to generate new advanced technology business starts and attract venture capital early in this decade, a new and more pronounced need for seed capital threatens to halt the momentum we have achieved in nurturing new technology based companies.

Venture capital is invested to purchase equity or near equity in the firms in which it invests. It is capital that is fully at risk since there are typically no assets to provide collateral coverage to the investor. Invested funds are used to complete development work on a product or service, introduce the product to the market; and provide needed working capital as the company begins to grow.



Venture investors work with the company to build enterprise value and then seek ways to monetize their investment by either selling or merging the company with another company or by offering shares of the company in public markets through an Initial Public Offering. This process normally takes years to accomplish and there are many opportunities for problems to arise and throw the company off stride.

Because there are such significant risks, venture capitalists invest, other things being equal, only in those companies where they are convinced that the prospective rewards in the form of capital gains are substantial enough to justify the risks.

In the current marketplace this means that only those companies with very high growth potential will secure venture capital. But since other things are never equal, high growth potential is necessary but not sufficient to attract investment capital.

Other things aren't equal because of the significant risks. Management, market, technology and business model risk all come into play. Proximity to the investor also plays in here. The younger the company is, the more this matters. Young companies need more oversight thus requiring more of the venture capitalist's time and attention.

### Venture Capital Trends<sup>1</sup>

Sixty-three percent of the professionally managed venture capital in this country is concentrated in the Silicon Valley and in Boston. Another sixteen percent is concentrated in New Jersey, New York, Texas and Washington. The remaining twenty-one percent is available to the remaining 44 flyover states.

Venture capital firms have increasingly larger pools of capital under management. Large venture capital firms now dominate the landscape. Fifty-six percent manage funds of \$100 million or more and average fund size has grown from \$85 million in 1995 to \$209 million in 2005.

The average size of investments has also grown, reaching \$7.4 million last year. If you have \$200 million to invest you could make twenty \$10 million bets or forty \$5 million bets. Since the work associated with each investment is not proportional with the size of the investment, venture partner time constraints trend to drive deal size higher.

At the same time venture capitalists have begun to shun start-up and early stage companies in favor of less risky later stage companies that can effectively use the amount of capital that larger funds need to invest in each deal. This shift has been dramatic.

### Venture Capital Investment by Stage of Company

	<u>1995</u>	<u>2005</u>
Seed & Start-up	16.7%	3.4%
Early	21.4%	15.7%
Expansion	46.7%	36.1%
Later Stage	15.2%	44.9%

### Venture Capital trends in Oklahoma<sup>2</sup>

From 1999 to 2005 Oklahoma firms attracted at least \$162 million in venture capital, 86% of it from outside Oklahoma.

This is a significantly different situation than existed in the early 90's when there were few deals and but one active resident venture capital fund. The launch of the Oklahoma Capital Investment Board's Venture Investing Program helped generate additional activity and spurred fund formation. The Oklahoma legislature enacted the small business investment tax credit in 1999 encouraging participation in Oklahoma venture funds and boosting angel investment.

Since then Oklahoma angel investors have invested \$55 million. Most occurred in the early part of the decade - some \$18 million in 2002. But angel investments dropped to the \$4 to \$5 million level in the past two years. As is the case with

professionally managed venture capital, the trend is away from early stage investing in favor of more mature companies.

The bad news is that in Oklahoma where entrepreneurial activity is still nascent; most of the companies are young and haven't reached the point of being attractive to either angels or venture capitalists.

### **The Capital Lifecycle Challenge**

Spin out companies that are commercializing new technologies based on discoveries at Oklahoma research institutions and new technology and service companies that are the brainchildren of entrepreneurs need capital. They must validate their technology, build prototypes, analyze markets and formulate go-to-market strategies.

So the enormous challenge is finding ways to support fledging firms from proof of concept through start-up, when they can compete for venture capital. This journey is known as the trip through the "valley of death".

The valley of death refers to that period in the development of a start-up enterprise when there are significant outlays of cash required but revenue is not yet coming in. It is a perilous period during which companies often fail: It takes longer or costs more to get a working prototype; the technology works fine on the bench but fails at commercial scale; unforeseen intellectual property issues emerge which preclude commercialization; the market is really not as accepting of the product at the price it is offered or the sales cycle is much longer and costly than forecasted.

So who would want to invest in companies at this stage?

Well, the first money comes from usually starts with the founders and their friends and family. But this usually a less than adequate amount than is necessary. There are a few angels who will invest at this stage and some entrepreneurs find ways to bootstrap their company. Bootstrapping works

better for firms that have a service component in their business plan. State or federal grants can also be helpful sources of financial support.

But all these sources are inadequate for most tech-based companies; they need seed capital to get them through.

Companies that successfully navigate the valley of death stand a much improved chance of success. If Oklahoma wishes to build on the momentum it has achieved in advanced technology entrepreneurial development new sources of seed capital must be developed and deployed.

This is not capital that can be imported. The risk profile means that we cannot expect local angels or venture capitalists to provide it. Yet there is a good case for enlisting private sector management of seed capital supplied from public sources.

If ever there were a need for a state economic development investment program this would be it. As little as \$10 million could be deployed in as many as 35 start-up companies. It would be reasonable to expect 350 jobs initially and 1000 within five years based on what we know about the performance of tech based companies in Oklahoma.

Without capital many entrepreneurs will be forced to abandon their dreams or go elsewhere and Oklahoma, as a consequence, will be a lesser place.

### **NOTES**

<sup>1</sup> NASVF Conference Proceedings, May 2006

<sup>2</sup> Data in this section supplied from i2E, Inc. files

## ***Regionalism: The New Economic Development Paradigm***

*Roy H. Williams, President & CEO, Greater Oklahoma City Chamber  
Oklahoma City*

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To grow and prosper, economies must be based on “primary jobs.” These jobs are in companies that add value to goods and/or services, export those goods/services out of the market, and import the wealth associated with the value added. These primary jobs are the ones most sought after by economic developers because they help grow the economy and make the pie larger, creating more “secondary jobs” along with them.

In today’s environment, primary job employers are using a different process and approach to determine where these jobs, and resulting capital investments, will be located. This change has a profound impact to community, regional, and state-wide leaders, as well as to the economic development profession.

The historic drivers for their decision was access to either: 1) Markets, 2) Resources, or 3) Labor. While each contributed to about one third to all the location projects, a fundamental shift has now occurred, forever changing the proportion. Today, about two thirds of all site location projects are driven primarily by labor – or in today’s vernacular – human capital.

Human capital availability is neither defined nor determined by political boundaries. Human capital consistently crosses city limits, county lines, and even state boundaries to reach its location of employment. Thus the providers of primary jobs no longer initially evaluate cities, counties, states, or other political divisions— rather they evaluate “regions” which provide their needed human capital and/or their market and resource access.

The implications of this change are far reaching and require an entire new way of thinking by public and private sector leadership. Historical profiles of cities, or counties, or states, by traditional demographic and economic data sets, are no longer useful. Rather, the customer (primary job employers) now demands intelligence on “economic regions.”

Today most community leadership does not market its economic region, much less it does not even know the makeup or definition of its economic region. That is problematic for the customer who is seeking the intelligence, but can find no provider. As well, there is no “service delivery system” in place to help the customer access his/her needs in the economic region.

Several decades ago, a few areas within the U.S. envisioned this new paradigm. As a result, extensive research evolved to define their respective economic regions and, concurrently, regional economic development organizations evolved and were formalized. Those early stage organizations continue to be the models of today. And not only do they market their economic regions, but also they serve as the primary service delivery organization to the customer.

This was no small task several decades ago, and continues to be no small task today. It is difficult enough to get local leadership committed to a local, long-term economic development strategy, but much more difficult to develop trust, commitment and dedicated resources to a region much larger than traditional political boundaries. Using local resources for regional economic development is beyond the scope of thinking for many local entities.

In no way does this imply that local economic development initiatives are no longer important. On the contrary, they are more important now than perhaps ever before. But today the dedication of some part of those resources toward a regional initiative is imperative due to the competition, but much more important – due to the customer’s need!

Very simply pictured, you can envision an economic development service delivery supply chain for customers. When a corporation decides to locate a facility, it needs services from the state and services from the city or locality in which it

locates. Often overlooked is the fact it also needs services from the region. Those services might include employee recruitment, employee training, educational partnerships, financial services, transportation services, multiple public sector services, vendor and/or supplier connections, etc. The supply chain missing those vital links is at a huge disadvantage relative to its competition and will likely result in a disgruntled customer. When that word gets out, the national corporate community is quick to spread it.

So all this being said – what needs to be done in Oklahoma?

Several things should begin immediately.

The first begins with educating public and private leadership about the new paradigm. The state municipal league, the county officials, chambers of commerce, other business organizations, etc. need to be engaged in the dialogue and understand these issues. As well, community colleges, career techs, higher education institutions, and other education and training providers need to understand human capital is a regional need, not a political boundary need.

A second thing to do is define the economic regions of Oklahoma. This must be done by an unrelated third party who understands this from a customer's perspective, as opposed to gerrymandering regions and doing politically correct regions – these must be economically correct regions.

A third thing to do is to focus state government on economic regions. A litmus test for much state government funding could be based on regional needs assessments, regional impacts, avoidance of duplicity, and the encouragement by using incentives to work in regional partnerships.

A final (but not necessarily the last) thing to do is actually create through state legislation, regional economic development zones with the power of taxation to fund regional economic development initiatives.

Economic development projects impact people and places far beyond the political boundaries in which

they reside. This must be recognized by the people, and ways must be found and developed to support these projects from the entire impacted region. Regional economic development is a critical part of the equation, but we must concurrently focus on the development of human capital on multiple fronts.

In central Oklahoma alone, we have nearly 110,000 college students, with nearly 25,000 degrees awarded annually. However, there is a major disconnect between the business community (employers of the human capital) and the education providers. Oklahoma businesses traditionally do not recruit on our university campuses and few universities proactively promote internships and solicit business input for the education needs of tomorrow.

As a result, most of the human capital developed in our higher educational institutions leave the state. They are unaware of opportunities in Oklahoma, they are not recruited and they are not connected with businesses providing career opportunities during their educational experience.

As well, other education systems and training providers share similar issues and problems. While we have multiple providers (such as career techs) they too suffer from defined geographic boundaries without a focus on the economic region. They too (as a group) have been unable to provide many of the workers needed today in the aviation and aerospace industry, energy industry, and in the medial and bioscience industry.

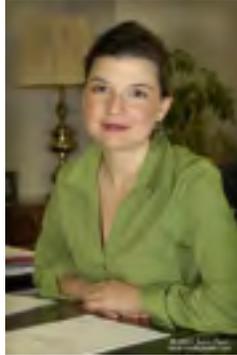
In essence, we do not have a seamless, effective system in place in Oklahoma that not only meets the needs of existing employers, but also is not preparing, producing and retaining the human capital Oklahoma needs for tomorrow. We do not have a process in place that identifies, recruits, screens, tests, trains and delivers qualified employees to employers to their standards.

Thus if we expect to be a place of choice by quality employers, and the talent they require to be globally competitive, then it is incumbent upon Oklahoma leadership to drive these needed changes.

## ***Oklahoma Revenues: Which Path to Prosperity?***

*Claudia San Pedro, MBA, Director and Tony Hutchison, MPA, Deputy Director  
Office of State Finance, Oklahoma City*

Most people are familiar with the old adage, “the only two sure things in life are death and taxes.” What is important to note is that while most people complain about paying taxes, most people agree government is responsible for providing quality cost-efficient and effective infrastructure services for education, public safety, health and human services and transportation. The challenge then, for policymakers, is having a revenue system capable of providing these services and sustaining economic growth.



### **Competitiveness, Ease of Administration, Transparency, and Equity.**

This paper will address the first three principles:

- **Adequacy and Reliability:** A sound state revenue system generates adequate revenues to support the important infrastructure areas of state government outlined above;
- **Stability/Responsiveness:** How well does the tax system respond to economic growth or economic decline;
- **Competitiveness:** A sound state revenue system does not impair economic performance of a state by placing undue tax burden, relative to other competitor states, on potential business locations, expansions, capital formation or income generation;

In 2001, the National Conference of State Legislatures issued the 4<sup>th</sup> edition of a white paper outlining the components of a sound revenue system. The National Tax Foundation has published a similar paper available on their website. The six principles are: **Adequacy and Reliability, Stability and Responsiveness,**

### **Overview of Revenues and Expenditures**

Revenues generated by taxes, not fees totaled nearly \$5.4 billion for FY-2005. Six revenue sources, income, sales, oil and natural gas gross production, gas and motor vehicle taxes, comprised over 94% of that total amount. On the expenditure side, 11 agencies represent 88% of the expenditures.

**Table 1**  
**Per Capita Tax Burden vs. Per Capita Income**

Source: Census Bureau Government Finances and Bureau of Economic Analysis

Tax	Income
40.....West Virginia.....	49
50.....Alaska.....	16
42.....South Dakota.....	29
46.....OKLAHOMA.....	39
41.....Arkansas.....	48
42.....South Carolina.....	43
45.....Montana.....	40
48.....Mississippi.....	50
47.....Tennessee.....	35
49.....Alabama.....	41

\* 6 of the lowest per capita income states are also bottom 10 tax states

**Table 2**  
**2002-2003 Regional Per Pupil Expenditures**

Source: National Center for Education Statistics

Missouri .....	\$7,495
Kansas.....	\$7,454
Colorado .....	\$7,384
Texas .....	\$7,136
New Mexico .....	\$7,125
Arkansas.....	\$6,482
OKLAHOMA .....	\$6,092
 Regional Average .....	 \$7,024

Table 3  
**Medicaid Spending Per Capita**

	United States.....	\$886
42	OKLAHOMA.....	\$680

Table 4  
**2004 Expenditures Per Inmate**

Source: Department of Justice, October 2005

13.....	New Mexico.....	\$28,035
20.....	Colorado.....	\$25,408
34.....	Kansas .....	\$21,381
42.....	OKLAHOMA.....	\$16,309
43.....	Arkansas .....	\$15,619
46.....	Texas.....	\$13,808
48.....	Missouri .....	\$12,867
	National Average .....	\$22,650

Table 5  
**2004 State & Local Revenue as a Percent of Income**

11	Arkansas	10.5%
14	Kansas	10.4%
29	New Mexico	9.9%
37	Colorado	9.5%
40	Missouri	9.4%
40	OKLAHOMA	9.4%

**2004 State & Local Revenue Per Capita**

23	Kansas	\$3,380
26	Colorado	\$3,169
35	Texas	\$2,881
38	New Mexico	\$2,861
44	OKLAHOMA	\$2,677
49	Arkansas	\$2,536

- Oklahoma sales tax rate is 4.5%. Of the 45 states with a state sales tax, 33 have a higher tax rate than Oklahoma.
- Oklahoma’s current income tax rate ranges from .5 to 6.25%. Of the 40 states with income taxes, 18 have a higher income tax rate than Oklahoma. Once, tax cuts are implemented reducing the rate to at least 5.5% there will be 27 states with higher income tax rates.

**Adequacy/Reliability**

This is one of the most contentious aspects of Oklahoma’s tax system. There are two points of view:

1. Oklahoma’s state and local revenue system generates inadequate revenue to fund government services in key areas. Thus Oklahoma does not have a sound revenue system and needs to preserve the current tax base or increase certain tax rates. Oklahoma state and local revenue collections per capita rank 44<sup>th</sup> lowest in the nation (Table 1). Similarly, education spending is consistently among the bottom five states (Table 2). Oklahoma teacher salaries are the 48<sup>th</sup> lowest in the nation. Expenditures for health care and inmates is also among the bottom ten states with both ranking 42nd (Tables 3 & 4).

This point of view asserts many states with lower tax burdens than Oklahoma are even poorer and less economically vibrant. In fact, six of the bottom ten states in per capita tax collections are also in the bottom ten in per capita income and all ten are in the bottom twenty in income (Table 1). If Oklahoma wants to increase per capita income over the long run, the state’s revenue structure must adequately fund key infrastructure areas which will in turn produce, attract and retain knowledge based industries.

2. The opposing view emphasizes the fact that Oklahoma does not rank quite as poorly on revenue collections if one looks at revenue collections as a percent of personal income. Oklahoma ranks 41<sup>st</sup> (Table 5). Proponents of this school of thought purport that Oklahoma’s revenue structure is adequate to meet the needs – it is just a matter of improving the cost-efficiency of state government programs and/or reducing government services and programs. When viewed as a percent of total income, Oklahoma does spend a significant amount of state revenue on education especially when compared to other states (Table 6). Moreover, this view supports the idea that lower income tax rates would actually spur increased economic activity naturally increasing the amount of tax revenues available for expenditure.

**Stability/Responsiveness**

A sound tax system is comprised of sufficient diverse revenue streams to ensure minimal volatility to government services during good and bad economic cycles. Property tax revenue is considered one of the most stable sources because it is more resistant to decline during economic downturns but it may not keep pace with inflation. Income and sales taxes are responsive to growth in good economic times but are also quicker to decline during economic downturns. Sales tax which is a direct reflection of consumer spending and behavior in the economy is the most sensitive to changes in the economy.

At the state level, Oklahoma has a diverse and responsive revenue system. Local revenue systems are much less diverse. School districts and counties are very reliant on property taxes while cities rely very heavily on sales tax. Some argue there is an over-reliance on income and sales tax to fund state government and local school aid since 47% of Oklahoma’s revenue is derived from income tax, 28% is derived from sales tax and there is no revenue derived from a state property tax (Table 1). In addition, since Oklahoma is one of five states with natural gas and oil revenues in excess of at least 10 percent of the state budget, Oklahoma’s revenue structure is more vulnerable to the volatility of commodities prices (Table 7).

A statutory or constitutional Rainy Day Fund mechanism with appropriate restrictions on how

funds can be spent also enable states to minimize adverse budgetary impacts during varying economic cycles. In November of 1985, Oklahoma voters moved to establish a Rainy Day Fund and transfer revenues in excess of 100% be deposited in the state’s Rainy Day Fund up to a maximum of 10% of the prior year’s general revenue fund. Changes enacted during the 2004 election placed tighter restrictions on spending in the Rainy Day Fund allowing 3/8 to be used for a current year general revenue shortfall, 3/8 for a prospective year general revenue shortfall and ° upon declaration of a disaster.

Oklahoma’s revenue structure has been sufficiently diverse and properly structured in light of the following:

- While income tax comprises 47% of the state budget, there are five other major revenue sources which prevent the state from disproportionately relying on one source over another. This diversity insulates the state to some extent from dramatic changes in the economy. For example, over 70% of the state revenue collected in Texas and Tennessee is directly from sales tax;
- Oil revenues have been taken out of the general fund and now account for less than 4 percent of total state appropriated funding. Natural gas revenues comprise 13 percent of the general revenue fund. The combined 17%

**Table 6**  
**Education Expenditures**  
**as a Percent of State & Local Revenue**  
Source: Census Bureau, State and Local Government Finances

1.....	Texas.....	41.0%
10.....	Oklahoma.....	38.0%
14.....	Kansas .....	37.0%
16.....	Arkansas .....	36.6%
17.....	New Mexico.....	36.5%
18.....	Missouri .....	36.3%
31.....	Colorado.....	33.3%
	National Average .....	34.4%

**Table 7**  
**2005 Gross Production or Severance Taxes**  
**as a Percent of State Appropriated Budget**  
Source: National Conference of State Legislatures

Alaska.....	50%
Wyoming.....	45%
New Mexico .....	15%
North Dakota.....	14%
Oklahoma .....	10%
Texas .....	6%
Louisiana .....	6%
West Virginia.....	5%
Montana.....	5%

14 states have a severance or production tax. Only 9 states collect more than 2.5% of their tax revenues from this source.

- represents substantially less than the 30% comprised by these revenues during the early 1980's;
- Under the constitution, the state is only authorized to spend 95% of the amount estimated to come in. This protects government services and programs from short term fluctuations in economic activity;
- As of July 2006, the state's Rainy Day Fund balance is \$495.7 million. This represents 10% of the general revenue fund and is a healthy reserve balance to utilize when there is a downturn in the economy.

### **Competitiveness**

Like adequacy, the competitiveness of the Oklahoma tax system has received much attention and generates diverse opinions.

1. Some argue that Oklahoma has a competitive tax system because Oklahoma is among the lowest tax states by almost any measure – ranking in the bottom ten even in rankings compiled by such conservative groups as the Tax Foundation. Economists such as Mark Zandi have shown that only about a third of state economic growth is due to low business costs such as taxes, labor costs and energy costs and Oklahoma always fares well in such business cost rankings (Moody's Economy.com). State taxes only make up about 10% of those business costs. Tax burden cannot be cited as the source of the state's lagging fortunes.

To adversely impact economic development and growth, Oklahoma's tax levels would have to be significantly out of proportion with surrounding competitor states. The recent exemption of Oklahoma sourced capital gains income provides a great incentive for both in-state and out-of state investment thus increasing the state's competitiveness. Moreover, proponents of this school of thought argue, the state needs to invest more tax dollars in roads, pk-16 improvement while keeping tax levels relatively competitive to generate economic development.

2. Those that say Oklahoma's tax system is not competitive from an economic development standpoint assert that Oklahoma's low per capita incomes reflect a poor competitive revenue structure. The current tax system provides benefits to old line industries that have plant and equipment such as manufacturing industries but doesn't incentivize knowledge industries such as software engineering, consulting and financial services. Proponents say that lowering income tax rates, eliminating the estate tax and complete elimination of the capital gains tax will generate new economic activity that will broaden the economic base and generate new increased revenues in the long run.

These diverging paths to prosperity have been the source of much discussion at the state Capitol. When faced with a decision of which path to take this past session, the Legislature and Governor ultimately compromised and took both paths. The 2006 Legislature and Governor completed the June special session enacting the largest tax cut in the history of Oklahoma and concurrently increasing appropriations investments in education, public safety, transportation and human services.

The marginal tax rate will be reduced from 6.25% to 5.5% in three years. The standard deduction for all individuals will increase to meet the federal levels in four years. The estate tax will be eliminated in three years. The total cost of this tax cut will exceed \$620 million. At the same time, teachers will receive a \$3,000 salary increase for FY-07 and a \$600 salary increase in FY-08. Higher education received a \$130 million increase in appropriations. Increases in transportation funding will ensure our state roads and highways receive \$6 billion over ten years.

These tax cuts and program investments will test both theories and the capability of Oklahoma's revenue system to adjust to these changes. As these strategies unfold, it is imperative that the citizens of Oklahoma understand the trade offs involved for each path and become actively engaged in the public policy debate.

## ***Reforming Oklahoma's Corporate Income Tax***

*Mickey Hepner, PhD,  
University of Central Oklahoma, Edmond*

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What if someone proposed companies pay higher taxes every time they choose to hire Oklahoma workers rather than workers from other states? What if we imposed a similar tax every time a firm wanted to invest more in Oklahoma's economy instead of elsewhere? Unfortunately, Oklahoma already has such a tax...the corporate income tax.

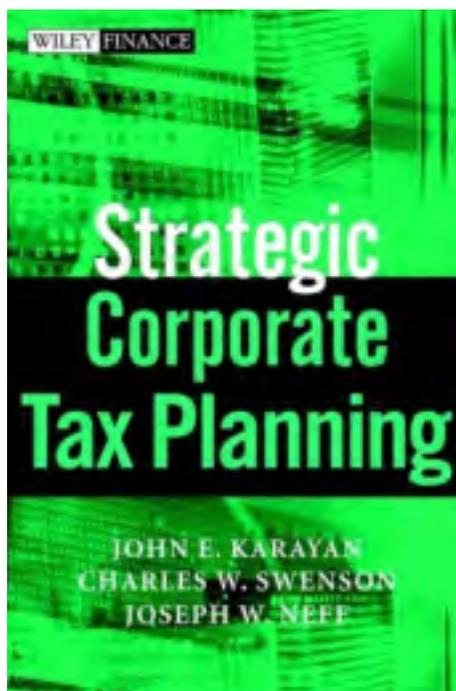
Generally, Oklahoma's corporate income tax equals 6% of profits earned in Oklahoma. For corporations with all of their operations completely within the state's borders, the tax is relatively straightforward to compute. However, many corporations have operations that extend to other states. For these multi-state corporations the state corporate income tax is much more complex. After all, when a firm makes a product in Oklahoma and sells it in many different states, how much of the profits are actually earned in Oklahoma as opposed to the other states?

To answer this question, Oklahoma uses a formula that takes into consideration the proportion of the firm's sales, property, and employment that are within our state's borders. For example, if a corporation has 30% of its sales in Oklahoma, 50% of its property in Oklahoma, but 100% of its payroll inside the state, then Oklahoma assumes that 60% of the firm's profits - the average of 30%, 50%, and 100% - were earned within our state. The corporate income tax is then 6% of these Oklahoma profits.

In one sense this formula is sensible. After all, if a firm employs workers and owns property within Oklahoma, then it is reasonable to claim that the firm earned some of their profits within this state. The problem with this framework is that if a firm employs fewer people in Oklahoma, they will pay a lower corporate income tax. Consider a similar firm that has 30% of its sales in Oklahoma, 50% of its property in Oklahoma, yet only 10% of its payroll comes from our state. The Oklahoma corporate income tax for such a firm would be based on only 30%—the average of 30%, 50%, and 10%—of the firm's profits. By hiring fewer Oklahoma workers, a firm can reduce their Oklahoma corporate income tax. *Oklahoma's corporate income tax punishes corporations for hiring Oklahoma workers.*

Similar arguments apply to the property factor. If firms invest in new machinery, a new building, or any other physical investment, they pay higher corporate income taxes *even if they do not make more profits*. As a result Oklahoma's corporate income tax punishes corporations for investing in Oklahoma.

It does not have to be this way. Suppose instead that Oklahoma's corporate income tax formula excluded any reference to payroll or property, and included only sales - a formula known as a - "Single Sales Factor". Under this formula a corporation with 30% of its total sales within Oklahoma (like the



two hypothetical companies from above) would be taxed on 30% of its profits. Such a formula is not only simpler than the current “Three-Factor” formula used by Oklahoma, but it also aids in economic development.

To understand this point, notice that the “Single Sales Factor” formula is more appealing to firms with relatively large proportions of its payroll and property (and low levels of sales) within the state. On the other hand, the current “Three Factor” formula is more appealing to firms with lower payroll and property proportions. Essentially, the Single Sales Factor formula reduces taxes for Oklahoma firms and *raises taxes for firms from outside our state* - shifting some of the tax burden to non-Oklahomans. This raises the profits for Oklahoma corporations thereby creating an incentive to hire more Oklahoma workers and invest in the Oklahoma economy.

Most other states already recognize the perverse incentives created by the Three Factor formula. According to the Federation of State Tax Administrators, of the 46 states that tax corporate income only nine states still use the Three Factor formula that Oklahoma uses. 37 states - including all of Oklahoma’s neighbors except Kansas - have reduced this tax on employment and investment.<sup>1</sup>

While most of these states continue to include payroll and property factors in their corporate income tax formulas (albeit at reduced levels), eleven states have adopted the Single Sales Factor formula. This number will grow to fifteen in the coming years as four other states are phasing in the Single Sales Factor formula.

Interestingly, adopting a Single Sales Factor formula does not necessarily reduce tax revenues flowing into state coffers (unless the Legislature was to also reduce the tax rate). Some firms - mainly firms located outside of Oklahoma - would pay more in corporate income taxes, while others with large amounts of payroll and property within Oklahoma would notice a tax cut.

Making this change is straightforward. In the corporate income tax statute, Legislators would simply need to change the formula that determines how much of a firm’s profits were earned within Oklahoma. Specifically, they would need to omit the references to payroll and property, and make sales the only factor. Therefore, Oklahoma corporations would no longer be punished by hiring additional Oklahoma workers or investing in the Oklahoma economy.

By removing the penalty Oklahoma firms face with the current corporate income tax, the single sales factor formula should enhance the state’s economic growth rate. Economists generally measure economic growth at the state level by changes in Real Gross State Product, the value of all goods and services produced within Oklahoma after adjusting for inflation. Essentially, this measure is the value of all income earned in Oklahoma (both personal and corporate incomes). The single-sales factor formula should generate positive effects on both personal and corporate incomes, leading to larger increases in Gross State Product.

Growing the Oklahoma economy requires firms to hire Oklahoma workers and invest in our economy. Yet, Oklahoma’s current corporate income tax actually punishes firms for engaging in this behavior. Our tax code should reward firms for creating jobs, not punish them. If we want to encourage more employment, if we want to encourage the development of Oklahoma businesses, we should adopt the Single Sales Factor formula.

## NOTES

<sup>1</sup> See

[http://www.taxadmin.org/fta/rate/corp\\_app.html](http://www.taxadmin.org/fta/rate/corp_app.html)

## ***No Oil & Gas: No Worries?***

*Adam Wilmoth, The Oklahoman, Sun July 2, 2006  
Oklahoma City*

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Six Oklahoma counties don't have to worry about natural gas plumes bursting through the surface and damaging homes.

Those same six far eastern counties have not had to deal with environmental problems from oil well blowouts. There are no "Wild Mary Sudicks" in Choctaw County, for example.

Unfortunately for those communities, however, the state's far northeastern and far southeastern corners also aren't seeing thousands of jobs and hundreds of millions of dollars in tax revenue the oil and gas industry has poured into Oklahoma over the past three years.

"That hasn't been lost on us," said David Hinkle, Choctaw County economic development director. "But God gave us water because we didn't get oil."

Oklahoma was founded on the oil derrick. The country's addiction to crude has fed the Oklahoma economy since before statehood. But the revenues from energy production have not been evenly divided.

Adair, Cherokee, Choctaw, Delaware, McCurtain and Ottawa counties all have had no oil and natural

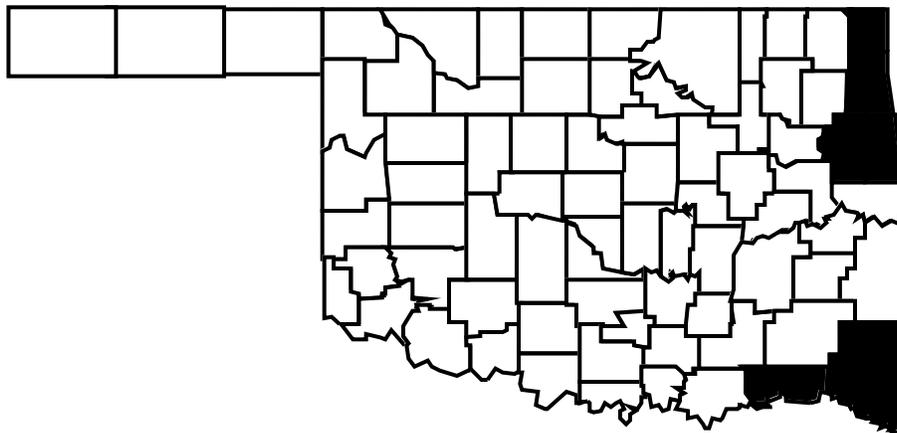
gas production in at least a decade, according to the Oklahoma Corporation Commission. Going even further back, the six eastern counties have produced only a tiny fraction of the state's oil and gas output.

Hinkle grew up near Ponca City, where local economics were somewhat different than his current home.

"There used to be a saying in Garvin County that if you were a young person of working age and didn't have a new car, you were lazy," he said. "Because of the oil and gas activity, there was always good-paying work available."

Hinkle said he holds no grudge against parts of the state that are benefiting from the oil and gas activity.

"We're all very appreciative of what mineral production has done here in Oklahoma," he said. "We're all very much in favor of it. But we do grimace from time to time because fuel is one of our primary inputs for agriculture, logging and our other industries. We're a fuel intensive part of the state, and the prices we've experienced have been noticed by every industry in the county."



Oklahoma's oil and natural gas industry is expected to pay a record more than \$1 billion in gross production taxes in fiscal year 2006, which ends this month. Various industry associations say the sector created more than 5,000 jobs in the state in 2005. The jobs and the money, however, mostly were created and spent in the state's 71 counties with oil and natural gas production.

In 2003, Roger Mills County received more than \$2.5 million in gross production tax revenue for schools and another more than \$2.5 million for county roads. The six counties with no oil or natural gas production did not receive a share of the gross production tax revenues.

In the end, however, the local school districts experienced little effect from the tax revenue discrepancy, Assistant State Superintendent Shawn Hime said.

"We use an equity formula that equalizes the dollars from school to school," he said. "All the revenue generated from chargeable items along with state money from the Legislature are put into a pool of money. Then it is dispersed based on the weighted number of students."

Increased gross production tax revenue anywhere in the state increases funding for all school districts by adding to the total revenue available, Hime said.

While school district funding includes an equalization function, however, revenue for roads does not receive the same treatment, Oklahoma Tax Commission spokeswoman Paula Ross said. Counties with more oil and gas production generally receive more money for road construction and repairs.

Far southeastern Oklahoma doesn't benefit from oil and gas income, but Hinkle said the local economy is still dependent on the land and its natural resources.

"Soil, wood and water are our natural resources," he said. "That's what we have, and we're certainly proud of them."

Water is a key resource for much of eastern Oklahoma. Lakes and rivers have been responsible for much of Delaware County's recent growth, said Rabbit Teague, manager of Delaware County Abstract in Jay.

"What saves Delaware County is Grand Lake," he said. "People work all their lives in California and then come here to retire. People want to be on the water, so they retire and come play on the lake."

Charles A. Neal is one of the few people in Ottawa County active in the oil and gas business. The 84-year-old businessman has interest in numerous wells in more prolific energy-producing parts of Oklahoma and Kansas. He also has attempted, unsuccessfully, to find natural gas below his home county.

"There's no real production in this part of the state as far as I can tell," Neal said. "We've drilled some wells, but we haven't found enough oil or gas to make them economical. We found some natural gas, but not enough to do anything with."

Neal's father joined the oil business in 1934. The company, Charles A. Neal Associates, has been participating in wells since 1947. "We're the only people in town in the oil business," Neal said.

While some have attempted to find oil and natural gas in the eastern corners of the state, others, however, say the communities are better off without.

"When the boom is over, we won't be in dire straits because we suddenly lost all this money from oil and gas production," said Russel Earls, chairman of the Ottawa County Commission. "If we don't live with it, we don't have to learn how to live without it

# **Targeting Oklahoma's Future Industries**

*Mark C. Snead, Ph.D., Director, Center for Applied Economic Research  
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## **Targeting Industries**

The economic development priorities in place today will almost certainly influence Oklahoma's industry makeup of the future. The EDGE initiative, the state's centerpiece economic development strategy, places a priority on developing industry clusters in aerospace/aviation, agriculture, biotechnology and biomedicine, construction, energy, manufacturing, telecommunications, and nanotechnology. Sensor and weather research have become de facto additions to the list.

These industries either offer high wage jobs and the potential to transform the Oklahoma economy, or they are already key components of the state economy and offer significant benefit if protected or expanded. In most cases, industries targeted today and enhanced with significant economic development funding will almost certainly be stronger and more developed in the future than if no action was taken.

I would like to make three observations about industry targeting as it is laid out in the EDGE initiative. The first is to broadly evaluate which of these strategies seem to be most appropriate and offer the most potential for success in Oklahoma. The second is to highlight some of the impediments faced by economists in tracking and measuring the success of new industry development. The third aspect examines the EDGE endowment fund as a funding vehicle for future state economic development efforts.

## **Which Industries are Appropriate?**

Philosophies abound on whether Oklahoma should try to target industries, and, if so, which ones to target. There is consensus that it is prudent to expend economic development resources to pursue industries where the expected future growth is so compelling that every state will attempt to develop a specialty, or try to secure at least a foothold, in the industry. These industries offer obvious long-term growth prospects, high wages, high technology applications, and spin-offs. Biotechnology & biomedicine, telecommunications, and nanotechnology are just such industries. Each offers exciting potential in future decades and seems more than worthy of state economic development funding.



Most also agree that a second group of industries is desirable because of a natural advantage in having the industry located in Oklahoma. The benefits from these industries arise from the fact that Oklahoma has a natural endowment or advantage that would make the industry potentially more successful here than in other states. One reason Oklahoma may offer an advantage is that a substantial concentration of the industry is already located here. These industries are desirable because they tend to stay here for the long haul rather than relocate in response to financial incentives from other states. Some of the EDGE industries with an Oklahoma advantage offer strong growth potential (for example aerospace, sensors, and weather research) while others may not necessarily promise strong growth and may in fact contract over the long-run (agriculture and energy).

A good example of an advantage through location is the aerospace and aviation sectors, some of the state's most underappreciated assets. The industry offers attractive (though probably not explosive) long-run growth potential and Oklahoma's central location makes the state well positioned for many aviation applications. But there are few natural advantages to locating aviation in the state other than the fact that we already have a strong industry in both Oklahoma City and Tulsa. Significant industry expertise, supply chain efficiencies, and an abundance of well trained workers make successful future expansion of the industry a very likely prospect.

The development of sensor technology at OSU provides promise for nearly unlimited practical applications, and the new sensor testing and certification center in Ponca City has the potential to act as a cluster location for the sensor industry. Weather research at OU has a long track record of innovative applications and has attracted firms using related technology in various business applications to the state. Both areas of research have established infrastructure in the state and have demonstrated their value as economic development vehicles.

Agriculture also presents a natural advantage and remains a vital interest in Oklahoma for four reasons: first, we already have a developed industry in place; second, the industry is becoming more technology intensive; third, crops and livestock continue to be produced competitively in the state; and fourth, it is a key determinant of the economic health of the rural counties of the state. These conditions are unlikely to change for several decades and suggest that economic development spending would be rewarded, especially if protecting the rural areas of the state is a priority.

Many of the same things are true of the state's oil and gas sector. In many ways it may be the perfect industry - high wages, capital intensive, export-based, oil and gas deposits can't be relocated to

another state, generates a large stream of tax revenue, and so on. The industry continues to provide tremendous stimulus to the overall state economy through spillover effects, especially in the current price environment. Given the ongoing fundamental shift in world energy markets, it seems likely that energy will remain a critical industry well into Oklahoma's next century.

Each of these industries has a competitive advantage in Oklahoma and offers a strong incentive to policymakers to aid in expanding or preserving the industry.

The remaining industries, construction and manufacturing, are simply less compelling as candidates to receive significant economic development funding. These sectors may be vital components of the overall economy, but they simply do not offer the same long-run potential as the other industries and enjoy no particular competitive advantage in Oklahoma. In addition, very large financial incentives are typically required in order to attract a new major manufacturing facility.

On these measures, they seem less likely to return large net benefits from economic development funding. Domestic manufacturing continues to undergo a long-run decline in the face of fierce international competition, and our competitive disadvantage is unlikely to improve in the foreseeable future. Neither is manufacturing a natural strength of the Oklahoma economy - we are below the national average and 34<sup>th</sup> among the states in the percentage of total jobs in manufacturing and do not have a concentration of high wage manufacturing in the state. The recent closure of the Oklahoma City GM plant eliminated some of the state's best manufacturing jobs. Large financial incentives should be offered only to those manufacturers who are willing to make a substantial capital investment in the state, can exert tremendous economic impact on the state, and are likely to stay long-term.

Construction also offers minimal promise as a mechanism for reshaping the state's economy over the next several decades. Even if technology spillovers occur, it will almost certainly be much less promising than discoveries made in industries such as the biosciences and nanotechnology.

#### Measuring Success

Even in the next century, job formation and wage gains will likely continue to be the primary yardsticks for measuring success in economic development. However, increasingly the problem for economists evaluating the success of economic development initiatives has become identifying the exact composition of an industry using federal databases on employment and income. Existing industry-based datasets are simply incapable of illustrating all of the various dimensions of a complex industry such as bioscience research. In general, the more sophisticated the industry, the less likely it is that the job gains are reported in one or a few industries that can be conveniently identified in the data, but instead are reported across numerous categories and prove difficult to extract.

The recent conversion of most economic datasets to the NAICS industry classification system has helped, but most major databases are still incapable of highlighting all of the natural linkages of a single industry with the rest of the economy. This limitation will prove to be even more of an obstacle when evaluating the industries of the future and will hinder efforts to evaluate the success of the state's strategy to target individual industries.

Tracking and measuring the success of future economic development initiatives will simply require more and better databases. The creation and maintenance of databases that track both industry and worker occupation and that group companies by the primary industry served will provide the type of precise detail on a given

industry needed to evaluate the impact economic development dollars are having.

More resources will have to be devoted to tracking industry formation and expansion. This will require supplementing public databases with privately collected sources, existing databases will have to be merged, and a periodic industry census will have to be performed when necessary. Job formation and income gains will still be the best measure of success over time, but we must begin to prepare better intelligence on exactly which jobs can be credited to which economic development initiative.

#### Funding Mechanism – EDGE Endowment

One last issue is the proposed EDGE endowment fund of \$1 billion that is intended to produce up to \$50 million in annual earnings to fund economic development initiatives. My view is that tying up such a large amount of what is essentially "risk" capital in a modest-earning endowment account is a fundamentally inefficient strategy. Spending the funds at a faster rate (for example, \$100 million annually over ten years) would produce a significantly larger near-term economic impact, would increase the likelihood of achieving long-run success in targeted industries, and, most importantly, would place the funds in the hands of entrepreneurs and researchers who have the potential for much higher returns than endowment fund managers.

An endowment fund may be the right vehicle for funding charitable and philanthropic ventures that are intended to last to perpetuity and have no time-sensitive objectives, but it is not the most efficient way to fund economic development expenditures. Warren Buffett expressed the same concern recently when giving away the bulk of his fortune when he stipulated that each annual gift must be spent in the year received, not held long-term by a 'low-compounding' charitable entity. Oklahoma should do the same with EDGE funding.

## *Creating An Entrepreneurial Culture*

*Sheri Stickley, Vice President, SSTI,*

*Edmond*

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### **A Transformation**

For two decades Oklahoma has had one of the most respected, but perennially under-funded, technology-based economic development efforts in the country — the Oklahoma Center for the Advancement of Science and Technology (OCAST). This year, however, Oklahoma's elected leaders took the first step towards making a *transformational* investment in science and technology. By granting a long-overdue \$10 million funding increase to OCAST, and by establishing the EDGE fund with a \$150 million down payment on a billion dollar endowment for research and commercialization, Oklahoma is signaling that it is ready to take its place as a competitor in the 21<sup>st</sup> century economy.

Increased funding for research and development is critical to building an innovation economy, but it is not sufficient. Oklahoma must make a simultaneous commitment to aggressively support entrepreneurship. Why? Because *entrepreneurship is the primary mechanism to convert innovations into local economic impact.*

A recent Small Business Administration study titled *The Innovation-Entrepreneurship NEXUS: A National Assessment of Entrepreneurship and Regional Economic Growth and Development*, reports that innovation without entrepreneurship generally yields minimal local economic impact. Entrepreneurship, however, “enhances the regional economic impact of investments in innovation.”

“Innovations,” the report says, “are highly portable, whereas entrepreneurship is place-based. Whether they are building new firms or reinventing existing ones, entrepreneurs, through the application of new ideas to products and services, capture locally the economic benefits of innovation.”

According to the report:

- The most entrepreneurial regions had better local economies from 1990 to 2001 compared to the least entrepreneurial. They had 125 percent higher employment growth, 58 percent higher wage growth and 109 percent higher productivity.
- The most entrepreneurial regions were associated with higher levels of technology. They expended nearly 54 percent more on R&D, recorded 67 percent more patents per labor force participant, had a 63 percent higher percentage of high-tech establishments and had a 42 percent higher portion of college educated population than the least entrepreneurial regions.

More high-tech establishments means more high-wage jobs. Nationally, high-tech jobs average \$58,090, compared to the U.S. average wage of \$34,669. In spite of these statistics, the study found that most regions analyzed are not experiencing the level of entrepreneurship activity that their existing innovation capacity will support. In response, states have begun examining their local environments to identify gaps in talent, services and resources that limit entrepreneurial activity, and developing means to encourage entrepreneurship.

What can Oklahoma do to attract and support successful entrepreneurs? Here are six strategies:

- 1. Keep the commitment to grow the EDGE fund to \$1 billion, and from it, regularly allocate sufficient funds to facilitate commercialization and entrepreneurship ...**

As noted earlier, the legislature has made a \$150 million “down payment” toward the \$1 billion EDGE



market opportunity while locked in a lengthy negotiation process with a research institution.

endowment. While significant, the actual amount of funds available for expenditure in any one year will be limited to not more than five percent of the assets of the fund. That means a maximum of approximately \$7.5 million will be available to expend in the first year. When EDGE is fully funded, annual proceeds will be approximately \$50 million – an amount large enough to finally make a real impact on Oklahoma’s R&D infrastructure. The enabling legislation further specifies that at least twenty-five percent of the funds available for expenditure must be allotted to support technology transfer and commercialization.

Oklahoma’s leaders are to be commended for taking this significant step. Yet there is a danger that in ensuing years, as newly elected officials replace those who enacted this legislation, they will lose sight of the fact that EDGE is a long term commitment. To achieve the intended impact, the legislature must continue to make steady investments in the EDGE fund until it reaches the promised goal of \$1 billion, and an appropriate share of the proceeds must be allocated each year to commercialization.

## **2. Accelerate university technology commercialization ...**

State Questions 680 and 681 removed perceived barriers to university technology transfer and commercialization in Oklahoma. To measurably affect the state’s economy, however, the pace of commercialization must accelerate. Researchers and research institutions must be incentivized to commercialize their technologies, and to develop and promote timely, efficient technology transfer procedures. Entrepreneurs attempting to commercialize university-developed technology have been known to miss their brief window of

## **3. Close the capital gap ...**

There are two significant entrepreneurship challenges that nearly all states face. The first is lack of access to early stage funding.

Continuing a multi-year trend, last year less than 2% of private venture capital nationally went to early stage companies – that is, companies that already have some revenue. Only a fraction of a percent went for seed and start-up deals. Such funding is essential in order for fledgling companies to survive to attract later rounds of capital. States and communities are finding it necessary to step in and fill this funding gap if they hope to see new technology companies launched and retained in their regions. They have done so largely by establishing publicly supported seed and venture funds and mobilizing latent angel investors.

Although a state constitutional amendment authorizing OCAST to make equity investments in private companies was passed over 15 years ago, the legislature never designated money for that purpose. With the \$10 million increase in funding to OCAST this year, Oklahoma should now move quickly to establish a state sponsored, privately managed seed capital program that reflects national best practice, and grow the fund by attracting private sector matching investments.

## **4. Take steps to attract experienced, serial entrepreneurs ...**

The second challenge facing virtually every state is finding experienced entrepreneurial managers to lead local start-ups. These are individuals who have already successfully launched a company, and who often form cadres of angel investors and mentors for new entrepreneurs. They are a unique breed possessing special management skills;

general business management experience is not enough. In fact, managers without this background can significantly undermine a young company's ability to succeed.

Greg Main, CEO of i2E, the not-for-profit corporation that manages the Oklahoma Technology Commercialization Center for OCAST, envisions two projects to attract experienced entrepreneurs:

***Establish an "Entrepreneur in Residence Program."*** Provide approximately \$2 million to recruit experienced entrepreneurs to come to Oklahoma, and provide them with access to capital to successfully launch new companies.

***Develop an online database of "Elsewhere Oklahomans."*** Out of state, successful entrepreneurs with ties to Oklahoma are often interested in returning home if they learn of an intriguing business opportunity. By building a database of "elsewhere Oklahomans," economic developers could identify both prospective entrepreneurial managers and technically qualified employees, and contact them when potentially profitable opportunities arise. Other states have worked with their universities' alumni associations to build this type of database.

## **5. Grow the pool of new entrepreneurs ...**

When the Oklahoma Technology Commercialization Center was created in 1998, its first priority was to provide one-on-one assistance to the backlog of individual entrepreneurs seeking to launch new technology businesses. While this "retail" approach is essential and will continue to be the organization's primary thrust, i2E executives Greg Main and Tom Walker also recognize the need to grow the pool of future entrepreneurs. Given adequate resources, they envision adding activities that would constitute a more "wholesale" approach. One example is the Donald W. Reynolds Governor's Cup College



Business Plan competition, now entering its third year. Other ideas include:

***Initiate an entrepreneurial internship program*** – Main wants to give students an opportunity to experience an entrepreneurial venture through an internship program specifically designed to provide business experience in the context of a high-tech start-up company.

***Establish a statewide entrepreneurial center*** – i2E Executive Vice President and COO Tom Walker sees the need for a center that promotes and raises awareness of entrepreneurship. The center would provide training for potential entrepreneurs as well as continuing education for more experienced entrepreneurs, bringing in experts to address specific topics. The center would highlight entrepreneurship for the broader community through publications and events. Finally, it would offer a variety of networking opportunities, and serve as an interactive forum to bring together the scientific, entrepreneurial and investment communities.

## 6. Cultivate a culture of entrepreneurship ...

Innovative enterprises thrive in communities that understand and support entrepreneurs. A culture that embraces and encourages risk taking is a major determining factor in whether a community experiences new economic growth or stagnation. A community's toleration for failure is a key indicator of the strength of its entrepreneurial climate.

While the state can provide funding for entrepreneurship support, local buy-in is critical. The entrepreneurial climate is strengthened when the key players in the community – business leaders, chambers of commerce, universities, the investment community, elected officials and government agencies – are all–“singing off the same page” in support of entrepreneurs.

Communities also build a vital entrepreneurial culture through strategic communications. Creating and communicating an effective branding message”about the community’s entrepreneurial climate and its core competencies can be key to attracting experienced entrepreneurs.

Communities must educate the media and recruit leading entrepreneurs to act as champions and spokespersons. The frequency and tone of media coverage of entrepreneurial ventures – both the successes *and* the failures – strongly influence public perception of, and support for, entrepreneurs.

### Metrics ...

The amount of venture capital attracted to the state each year is a good primary metric to gauge progress towards creating a sustainable entrepreneurial culture. It is estimated that Oklahoma must attract at least \$100 million per year to be competitive nationally; in Oklahoma's best year to date, state ventures attracted only \$60 million. The \$100 million represents a milestone, the amount necessary to “put Oklahoma on the map” as a flourishing center of entrepreneurship

and investment. Reaching that milestone depends on Oklahoma's determination to implement the strategies discussed above.

Other indicators include:

- Whether the state keeps its commitment to grow the EDGE endowment to \$1 billion by making regular deposits to the fund, and continues to allocate a sufficient percentage of the fund's proceeds to commercialization and entrepreneurship.
- The effectiveness of research institutions' technology transfer and commercialization efforts as indicated by patents filed, licenses executed, revenues from fees, royalties and equity in companies formed, and the number of companies formed in Oklahoma.
- The number of new technology start-up companies in the state each year.
- The number of serial entrepreneurs who reinvest in new ventures in Oklahoma each year.

Oklahoma, with its quality research institutions, resources such as OCAST and i2E, growing media attention on research, technology and high-tech start-ups, and ingrained appreciation for risk takers based on its wildcatting heritage, is well positioned to create a vibrant, sustainable entrepreneurial culture. What's needed now is consistent financial support and unwavering public commitment to ensure that Oklahoma achieves a competitive, 21<sup>st</sup> century economy.

***Oklahoma's Challenges and Opportunities***  
*Wes Stucky, President, Ardmore Development Authority*  
*Ardmore*

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If Oklahoma is to improve its national ranking and performance, it is absolutely critical that we take bold steps to improve our business climate and that we invest in projects and activities that will generate economic growth. The greatest potential for growth is found in those business sectors that hold the most reasonable potential for investment in Oklahoma.



**CHALLENGES FOR  
TARGETED BUSINESS SECTORS**

Target business sectors that hold promise for Oklahoma have been identified by previous studies. Following is a listing of challenges and recommendations for each target sector.

**Bioscience**

Bioscience is a rapidly growing global industry that offers high paying, quality jobs across a range of occupations. Building the base and becoming an economic generating engine will require implementation of four strategies outlined in the Battelle study:

1. Build the R&D base and encourage rapid commercialization of bioscience discoveries.
2. Develop and attract bioscience talent to the region.
3. Grow a critical mass of bioscience companies by creating an environment in which firms can start up, grow and prosper.
4. Build a bioscience image and market the region.

**Aerospace**

Oklahoma aviation and aerospace operations generate 10% of the total industrial output in our state. We have the infrastructure and the companies; the cluster exists and can be expanded

significantly.

Challenges to reach our potential include:

1. Enhancement of the Oklahoma Bid Assistance Network with a focus on aerospace.
2. Growing the Oklahoma Aerospace Alliance into an economic generating engine.
3. Establishment of a business promotion office focused on Tinker contracts. (Oklahoma companies currently gain only 5% of the \$4 billion in annual contracts).
4. Creation of an Infrastructure and Inducement Fund to retrain and attract aerospace companies.
5. Increased facilities and funding for training to meet the demand for skilled workers.
6. Increased funding and capabilities for the Center for Aircraft Systems/Support Infrastructure (CASI)

**Logistics**

Third party logistics is an \$89.4 billion industry in the United States and it will continue to expand in the future. Distribution warehousing and outsourcing to logistics operations is the next arena of corporate re-engineering, according to a study released by Boyd Company, a Princeton, New Jersey consulting firm specializing in the industry.

Tied to the growth is a dramatic increase in Air Cargo which is expected to grow at a 9% rate annually for the next twenty years. New trends in the logistics and the air cargo industry emphasize the importance of hubs being located within 400 miles of major population centers.

The Oklahoma Department of Transportation and the Oklahoma Department of Commerce commissioned Parsons Brinckerhoff/PB Consulting to explore Intermodal logistics hub opportunities in Oklahoma. The study recommended the development of a major Air Cargo Facility to serve foreign and domestic deliveries at a major rural airport or a decommissioned military Airport with good linkages for truck and rail shipments.

The study clearly identified the advantages of an Oklahoma location and the capabilities of serving the growing sectors of the nation.

Recommended actions include:

1. Conduct a market study with an Asian firm to develop linkages.
2. Create a partnership with potential distribution areas in Europe.
3. Conduct a market study in partnership with Mexico and Central America
4. Assist in funding necessary infrastructure improvements for an International Trade Center and Air Cargo Intermodal Logistics Hub.

### **Auto Assembly and Suppliers, Machinery and Transportation Equipment**

One in ten manufacturing jobs in America is directly related to the automobile industry. With the announcement of Toyota in San Antonio and DaimlerChrysler in Savannah, the Southern Auto Corridor suddenly widened significantly. Currently, other OEM's are searching for sites in the Southern Sector.

The auto sector includes far more than assembly plants. Major 2<sup>nd</sup> and 3<sup>rd</sup> tier suppliers provide the bulk of employment and a significant share of industry investment. A recent study by the University of South Carolina determined that the total economic output resulting from the BMW plant totals more than \$4 Billion and includes more than forty support industries.

According to a University of Kentucky study, the annual rate of return on that State's incentive package for Toyota is approximately 37%. Alabama officials estimate that their incentive to Mercedes was returned in 3.5 years.

As the industry changes and more plants locate in the Southern Corridor, the available locations diminish. Oklahoma has great potential for suppliers to the industry throughout the state; however, Northeast Oklahoma appears to have the best qualified location for a major assembly plant.

Recommended actions include:

1. Conduct an analysis of potential sites in Oklahoma (completed)
2. Develop a marketing strategy for auto companies and the vast supplier network (Oklahoma is a prime candidate for supplier companies even if an assembly plant does not locate in the state).
3. Develop a strategy to help Oklahoma machinery and transportation equipment compete on a global economy and to increase their exports. (Machinery and transportation equipment rank number one and two in value of Oklahoma exports)
4. Fund infrastructure improvements to the potential sites for an auto assembly plant.
5. Commit to funding the incentives needed for a major auto assembly or other mega-project.

### **Other Industry Sectors (Food Processing, Weather, Business Services/IT**

Food processing generates approximately \$1 Billion annually in GSP. Interestingly, the impact in Oklahoma does not meet what would be

expected. For example, this sector is responsible for 5.6% of the GSP in Kansas; and, the national average for all states is 4.4%. While Oklahoma's 4.5% is slightly above the national average, one could expect an agricultural state with great distribution potential to boast a much higher percentage than the national average.

The food and beverage industry is highly fragmented. The market is so large that sales of the top ten companies represent only about 24% of the total. Smaller firms have opportunities and states that foster the attraction and development of such companies will find success. Several Oklahoma communities (Altus, Guymon, Elk City and others) have benefited from their investment in incentives that attracted food processors.

Recommended actions for increasing food processing, particularly in rural Oklahoma, include:

1. Identify market niches and potential opportunities
2. Develop project ready sites with adequate community infrastructure to serve food processing plants.
3. Creation of a "closing fund" to provide the needed incentives for acquiring major projects in rural areas.

**Business/IT/Weather.** Oklahoma has a major influence and predominance in weather and although it is a smaller market, our strength makes the potential impact significant. Growth in this sector and the IT/Business sector will be driven by research and subsequent emerging technology companies, both of which are dependent on funding.

Actions needed include:

1. Increased research funding.
2. Collaboration between private companies and universities
3. Growth, attraction and retention of talent
4. Project ready sites (space) and incubation infrastructure
5. Venture capital

**The Right Investment ...  
at the Right Time and in the Right Place**

Oklahoma needs to invest in what has the best potential and in the areas of the state best suited to meet business sector requirements. Perhaps our greatest challenge is to overcome jealousy of one area of the state receiving state support for a particular initiative or what amount of money is being spent in urban versus rural areas.



## ***Rural Development - Options and Opportunities***

*Mike Woods, PhD, Professor and Extension Economist*

*Oklahoma State University, Stillwater*

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Rural development solutions vary depending upon the geographic location and unique circumstances of specific rural regions. Oklahoma is a good example of the diversity observed in rural America. Western counties of Oklahoma are heavily dependent on agriculture and oil/gas. Population tends to be declining in these counties and employment growth is erratic or slow.

Much of the Great Plains region (bread basket) in the U.S. falls in this category. Eastern Oklahoma has some rural counties experiencing rapid growth, often based on amenities, outdoor recreation, and in some cases specific sectors like manufacturing. Other counties experience persistent poverty and low income levels. The state has counties that are suburban and are feeling growth pressures and urban encroachment. The state also has what could be considered “frontier” counties with extremely low population density. Clearly, the conditions faced by each county are distinct. This diversity leads to unique development problems and potential solutions that vary by geographic region.

Based on the 2000 Census, Oklahoma’s population is about 39 percent non-metropolitan. This number has been dropping (in percentage terms) over the last several decades. This is a national phenomenon. A complete summary of economic conditions and trends in rural Oklahoma can be found at [www.rd.okstate.edu](http://www.rd.okstate.edu).

A rural development “roundtable” was hosted in May, 2006, by Langston University and Oklahoma State University. The intent of the roundtable was to identify positive features associated with rural Oklahoma, to prioritize action steps to strengthen the future of rural areas, and to refine strategies that offer opportunities for rural areas. The effort was supported by the W.K. Kellogg Foundation

and the Southern Rural Development Center and similar efforts were conducted across 14 states. These were 50 participants representing all regions of the state and individuals representing small business, education, government, volunteer organization, and the faith community.

The participants were assigned to eight tables with a facilitator leading discussion at each table. The first item of discussion was to identify the positive features or assets that exist in rural Oklahoma. There was a surprising consensus across the tables. A top asset mentioned was the quality of life available in rural Oklahoma. This includes a wide variety of attributes such as clean air, less pollution, land and “wide-open” spaces. Participants also identified the natural resource base in rural Oklahoma as a key asset.

These resources (land, water, wildlife, and agriculture, etc.) offer both traditional opportunities for economic activity as well as emerging opportunities such as agritourism. Other assets mentioned frequently by the group include the people of rural Oklahoma and their natural friendliness and positive values. The lifestyle offered by rural communities and small town “charm” was also mentioned. The sense of community available in many rural areas was also noted.

The “roundtable” participants were challenged to identify the top rural development priorities in Oklahoma. Across the eight tables over 125 specific issues or ideas were identified. Through a prioritizing process these issues were refined to three, agreed upon by the participants. The first priority or issue identified was “human capital development.” Education at all levels including public schools, labor force training, and adult education was felt to be fundamental for the future of rural Oklahoma.



The second priority identified was “infrastructure.” This includes traditional infrastructure for public services like water, sewer, transportation, etc. This also includes digital infrastructure. If rural areas are to be competitive locations for businesses and families then high speed or broadband technology will be necessary.

Infrastructure is fundamental for development and includes traditional concerns like water, sewer, roads, and bridges. Safe, reliable water is critical for both quality of life and for development potential. In Oklahoma, for example, the USDA office indicates we have the seventh largest rural water portfolio in the country. Oklahoma has over 400 rural water districts. More and more, the responsibility for funding these water systems has been shifted to local sources which can be challenging for economically depressed regions.

We must also consider digital infrastructure if we desire rural areas to be competitive in the new information economy. Providing broadband access to rural areas is a significant concern. While rural access rates have been increasing since 2000, they still lag behind those in urban areas. Leaders in Oklahoma indicate that satellite access to broadband has greatly enhanced electronic access for rural areas. Partnerships with telephone cooperatives and Tribal governments are exploring opportunities for wireless towers, often funded by USDA low interest loans. Even with adequate

access in rural areas, an additional issue may be familiarizing people with the technology.

Ranchers, farmers, and other rural residents deserve the same quality medical and educational services available to individuals living in urban areas. Because of economies of size, it is often difficult to provide these services in sparsely populated rural areas without governmental assistance. In addition to the need for these services, the health and education sectors are often the largest employers in many rural communities and thus perform an economic development function. These employers often provide jobs to farm spouses enabling farm families to have health insurance.

The third priority identified was “economic development.” This involves strategies to diversify and strengthen the rural economy through a multitude of possible options including value-added agriculture, agritourism, small manufacturing, alternative fuels, and more.

A diversified rural economy means off-farm jobs will be available for rural residents. Value added efforts in agriculture have been important for a number of agriculture oriented states like Oklahoma. Feasibility studies for an ethanol plant and the American Native Beef Plant have recently been completed. A noted value added venture, Value Added Products (VAP) in Alva, Oklahoma involves 800 producers across the state and continues to be a success story.

A notable shift in attitudes in rural Oklahoma has emerged and community leaders are “hungry” for alternative sources of economic growth. Another increasingly popular option for the advancement of rural areas is entrepreneurship. There is a growing interest in entrepreneurship in Oklahoma, our region, and around the country in general. Regional Rural Development Centers located at Land Grant Universities have supported a national coalition for rural entrepreneurship. Recent “listening sessions” held in seven states through the southern region involved almost 300

participants and identified key topics and possible actions to grow entrepreneurs and communities.

In Oklahoma, possible action steps identified included agritourism development, youth entrepreneurship, alliances with Native American efforts, business start-up “boot camps,” and assistance with information technology.

Participants in other sessions and communities identified activities including building strong public schools, partnering, investing in technology, and utilizing a community-based strategic planning process. If entrepreneurship is to grow in rural America, digital infrastructure will be important. Rural businesses, consumers, and communities not only will require infrastructure like broadband access but will need the training to effectively utilize the technology.

Recent efforts in Oklahoma have reinforced the importance of local leadership and capacity building. Community development efforts succeed when appropriate tools and training are made available to rural communities. The Initiative for the Future of Rural Oklahoma found that community groups are eager and willing to “buy in” to a strategic planning effort utilizing existing local resources and seeking out resources that are not present but needed <http://ifro.okstate.edu>.

Community and regional groups developed local plans with local ownership and were provided networking opportunities to utilize both state and federal sources of assistance. The resulting strategies were both entrepreneurial and place-based.

The U.S. Small Business Administration recently released a study that examines the factors leading to small business growth in rural areas. Among the key findings it was noted that:

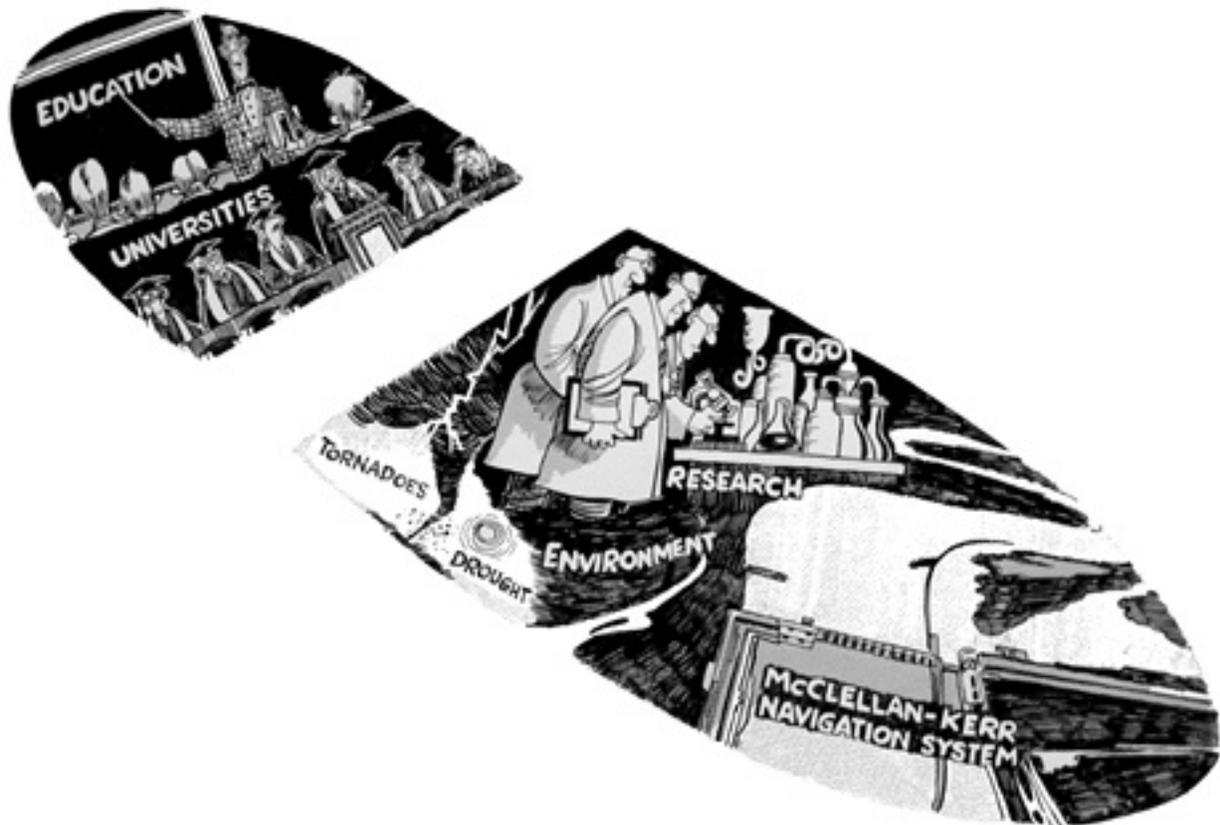
- (1) the number of high school graduates increases the number of rural small businesses;
- (2) the presence of natural amenities exerts a positive influence on business growth; and

(3) rural areas have difficulty attracting high-tech businesses due to workforce and infrastructure concerns. This is very consistent with the concerns related to “human capital” and “infrastructure” voiced during the recent Oklahoma rural development roundtable. The complete SBA report can be found at the SBA, Office of Advocacy, [www.sba.gov/advo](http://www.sba.gov/advo). Two final points summarize the outlook for rural development in Oklahoma:

- a. Communities and regions should look at all available resources (natural, institutional, human, and financial) when considering the future. The key is how these resources are combined and utilized. What is the best “solution” for growth in any unique place? Communities and regions should be encouraged to develop holistic strategic plans and then public resources allocated to support these efforts.
- b. Rural entrepreneurship offers great hope for rural regions. Resources of all types (institutional, infrastructure, financial) can make a difference. Human resources are also vitally important. Appropriate investments in training, leadership, local capacity, and knowledge will enable rural entrepreneurs and potential entrepreneurs to be competitive in our global economy.

Possible metric to measure development progress: “percentage of rural residents/businesses with broadband access as opposed to their urban counterparts”





# *Environmental Oklahoma<sup>^</sup>Footsteps*

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*Each author in this section was asked to respond to the following question.*

***“Consider the values and attitudes you see in Oklahoma. What are the challenges Oklahoma faces in meeting the high levels of environmental development, conservation, protection and regulation needed for an economy that will capitalize on the growth sectors of the 21st century?”***

*Each author was requested to suggest the one metric that best measures progress in this area – and explain the importance of that metric. The content is the sole responsibility (and choice) of the author as long as it was responsive to the question. The Academy did not dictate content to authors. Nor did the Academy edit content beyond grammar, punctuation and layout. This section contains those responses.*

## ***Where The Water Goes - The City/Town Grows***

*Cheryl M. Dorrance, Director of Research  
Oklahoma Municipal League, Oklahoma City*

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At the Oklahoma Municipal League, we field hundreds of calls for assistance from Oklahoma towns and cities. Many callers think that their dilemma is unique. Often, they are recurrent themes or trends shared by others who seek community betterment. Many these days, deal with water and environmental concerns.

We are still a rural state but a state of towns and regional centers. Only 38 of our 589 cities and towns have more than 10,000 population. These small communities are faced with special challenges for the next 100 years. Let's discuss a few hurdles to overcome from the side of the 551 smaller communities. *In the water arena, 80 percent of Oklahoma families and businesses depend on water from a municipal source.*

### **CHALLENGES**

#### **Aging Infrastructure/Environmental**

**Regulations:** Municipalities founded prior to statehood face aging infrastructure combined with increased environmental regulations that escalate the price of providing basic services like water, sewer, fire protection, storm water regulation, and wastewater treatment. New Environmental Protection Agency (EPA) regulations hit every year. Two years ago it was Disinfection By-products, last year a new arsenic standard, this year Disinfection By-products II. The EPA estimates \$5 billion dollars in water/wastewater infrastructure needs in Oklahoma over the next 20 years.

The bottom line is that water previously considered safe to drink now has to meet new standards. The days of cheap water are over. Add new wastewater treatment standards and storm water regulations to clean up streams/lakes and the price of business goes up. Currently 40 percent of towns and cities report being under a Department of

Environmental Quality (DEQ) consent order for non-compliance with current regulations. DEQ predicts that more than 70 percent of systems will fail to meet one or more of the new federal regulations.

**Quality of Life:** Quality of life issues such as green space, environmental preservation, clean communities void of weeds and dilapidated structures become increasingly important for Oklahoma communities to compete for businesses, lure retirees, and, yes, even keeping our children in state. A quality environment comes with a price tag. For example, Oklahoma has a stringent standard for phosphorus in scenic rivers like the Illinois. The City of Tahlequah has increased treatment efficiencies toward meeting the .037 phosphorus standard with a new \$9 million dollar wastewater treatment plant.

*An Oklahoma Municipal Profile  
**Environmental Excellence at a Price  
Westville, Population 1,596***

*A state of the art wastewater treatment plant will bring Westville, located in the watershed of the Illinois scenic river, into compliance with the more stringent phosphorus limit. The current plant discharge exceeds the phosphorus standard on the Illinois by five times. More than \$3 million is required for new construction. While Westville diligently sought grants/loans from the Oklahoma Water Resources Board (OWRB) and USDA Rural Development Administration (RDA) to cover the bulk of the costs, the sewer rate was increased to \$25.25 per month for the average family of four to repay the RDA loan.*

**Financial Resources State and Local:** With \$5 billion dollars in needs, will there be enough loan/grant funds and private sources to supplement local revenues when high standards and tech solutions converge at a point beyond local citizens' ability to pay? It is the price of viable communities in the 21<sup>st</sup> Century. How will citizens pay for it? Municipalities depend on goods and location based revenues (sales taxes) to provide the services to grow Oklahoma. Meanwhile, growth areas for the future are services and knowledge based businesses.

The average Oklahoma municipality counts on local sales taxes to provide more than half of the budget. They receive no property taxes for general operations and less than five percent of revenues from the state, compared to 13 percent nationally. In Oklahoma, local revenues provide local services.

What does this mean for the future of Oklahoma as relates to municipalities, water and the environment? In many cases, it means expensive

*An Oklahoma Municipal Profile  
Cooperation Yields Economy of Scale  
Granite area, Population 1,844*

*The towns of Granite, Lone Wolf and Martha, along with the Oklahoma State Reformatory, Quartz Mountain Resort and communities of North Shore and Boydville were all under consent orders by DEQ for water quality violations due to high nitrate levels. They formed the Quartz Mountain Regional Water Authority. Each member contributed \$30,000; Granite received a \$500,000 Community Development (CDBG) grant. Then, the members secured \$3.8 million in grants/loans from RDA. The new regional reverse osmosis plant provides high quality water to the partners at a reasonable price saving millions in construction and operation costs.*

water and wastewater treatment improvements that are beyond the capacity of the local community.

**Long-term Water Supply and Drought**

**Management:** Long-term water planning and resource management extends beyond water quality to water supply, distribution, and drought management. Communities like Ada that depend solely on Bird's Mill Spring or Shawnee with dropping lake levels are actively seeking solutions. The completion of the OWRB statewide water plan update can provide guidance with an analysis of water supply alternatives.

**Labor Force:** A back door issue, especially for small communities, is a trained labor force. Many municipalities have an aging work force. Operation and maintenance of new higher tech facilities means well-trained operators and engineers with knowledge of math, chemistry, and environmental issues. With new federal regulations, come more complex testing and operation procedures. New high-tech water/wastewater plants require high-tech trained operators. Oklahoma needs to build the quality work force that can sustain well-run community services. This means availability of training resources. Municipalities must be able to pay the salaries to keep these workers on the job.

**Keys to the Future:** Let's look at several keys to the future, water planning and conservation, innovation, and cooperation. Each municipality needs a long-term water supply and management plan for the next 20-50 years. Management plans need to include water quantity, quality, reliability, and conservation. The Oklahoma Municipal Utility Providers (OMUP), a sub-group of the Oklahoma Municipal League is equipping municipalities with information, sample ordinances, drought management information and networking opportunities to plan for the future.

Secondly, Oklahoma municipalities need to look to innovative ways to address local problems.

Thirdly, communities need to look to cooperative efforts to save money, enhance services and return the greatest service to citizens for the dollar.

The Oklahoma Municipal League is dedicated to educating and equipping Oklahoma town and city officials to meet demands of the future. While local effort is vital, the increasingly complex and expensive requirements mandated from state/federal sources, in many cases, require availability of state and federal resources to assist communities. Education of municipal leaders and a trained workforce are imperative. Cooperation should be incentivized when it provides the best solution. There is a recurrent theme: to be competitive we must raise the bar on good administration and service delivery.

#### **Metric**

Number of towns and cities with a long-term plan for water supply that can provide water to meet federal regulations on a consistent basis at a price that citizens can afford. Or consider the percent of water systems with consent orders from DEQ.



*An Oklahoma Municipal Profile*  
**Costs of Environmental Regulation**  
**Cherokee, Population 1,630**

*Problems with water quality required construction of an expensive reverse osmosis water treatment plant. To meet OWRB loan payments for this small community, the base monthly cost of water is \$42 dollars for 5,000 gallons. Now Cherokee tackles the problem of compliance with wastewater standards.*

*An Oklahoma Municipal Profile*  
**Innovation in Conservation**  
**Sallisaw, Population 7,989**

*When drought brought lower lake levels, the City of Sallisaw became proactive. While they addressed conservation measures and alternative water supplies, they found an innovative means to save water. A local industry used water for its cooling tower and knew of a process to convert the tower to air-cooling. The city shared half of the cost of conversion to an air-cooled tower. Result: 89,000 gallons of water a day saved and 89,000 less load on the wastewater plant. While water is still Sallisaw's main concern as they search for alternative long-term supply, innovation saved substantial water on a daily basis.*

*An Oklahoma Municipal Profile*  
**Out of Water Without a Creek**  
**Bridgeport, Population 109**

*In December 2005, Bridgeport had a newly refurbished water tower when the town's two wells went dry. The Oklahoma Emergency Management Department provided the average family with four gallon bottles of water a day. They used an old hand-dug well for water to flush toilets and water animals. Several alternatives proved too costly due to distance or water quality problems. Local funds plus OWRB grants/loans finally resulted in new wells. Luckily, no wildfire swept the area during the crisis.*

## ***Growing A Sustainable Future With Oklahoma Agriculture***

*Anita Poole, Kerr Center for Sustainable Agriculture*

*Poteau*

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Oklahoma's agricultural history, graphically described in books such as *The Grapes of Wrath* by John Steinbeck alludes to the fact that conventional farming techniques without concern for protecting the environment lead to disasters such as the "dust bowl". Oklahoma farmers and ranchers are now encouraged to use best management practices and conservation practices to ensure that our farming future will be bright.

Sustainable agriculture is a system that will last while maintaining productivity over the long run. To be sustainable, farming must be economically productive, environmentally sound, and socially responsible. The Kerr Center developed a comprehensive listing of eight goals for growing sustainably. The goals are as follows:

- Conserve and create healthy soil
- Conserve water and protect its quality
- Manage organic wastes and farm chemicals so they do not pollute
- Select plants and animals adapted to the natural environment
- Encourage biodiversity of domesticated animals, plants, wildlife, microbotic and aquatic life
- Manage pests, including weeds, disease and insects, with minimal environmental impact
- Conserve non-renewable energy resources
- Increase profitability and reduce risk

To be most effective, each of the eight goals mentioned above must be used as a whole. The goals often overlap one another. An example that the Kerr Center uses to illustrate this fact is how well a farmer preserves his topsoil directly impacts his water quality, his profitability, his risks and even the biodiversity of the microbial life in his soil. How Oklahoma farmers manage the fertility of their soils will affect not only their long term profitability, but the profitability of the businesses they patronize in their communities, and ultimately the economic health of our state.

Many people assume that farming and ranching in Oklahoma are only done on commercial or industrial levels. Oklahoma is known for large herds of cattle, thousands of acres of wheat, and now industrial farming of poultry and swine. However, there are a growing number of small and medium sized producers that are growing under what some consider as an "alternative" method of farming – either sustainably or organic. Alternative methods simply allude to methods that have been practiced in the past prior to heavy chemical usage with more intensive management by the producer. Also, one must note that "sustainable" and "organic" are not synonymous. Organic farming uses only organically certified inputs such as compost, while sustainable may use some chemical inputs — but only on a limited basis.

A major challenge in the field of agriculture in the future will be to meet the growing special demands of consumers.

Consumers all over the world are showing a greater interest in how their food is grown. The Europeans have refused grains grown from genetically modified seeds. The demand for organically grown produce and meats is rising. People are concerned about the rate of obesity in our state, and are looking at our diets as a major cause of obesity.

Consumers want to know if their foods have had large amounts of chemicals sprayed on their produce. Consumers want assurances that the practices used to raise food crops does not pollute their environment and drinking water. They want to know if their meat has been injected with hormones or antibiotics. The health industry is becoming a major driver in consumer demand by identifying nutritional and lifestyle choices that are causing our citizens to become obese.

Everyone involved in agriculture is involved in the food industry. Thus, all farmers are subject to providing the type of products that consumers are willing to purchase. Farmers in Oklahoma must learn to sustainably produce their products to meet the demands of our consumers both in our state and across the globe.



The Farm to School Program was legislated in the 2006 Oklahoma Legislative Session as a program to assist in the purchase of Oklahoma farm products by Oklahoma schools. In future years, programs like Farm to School will expand our local food systems and will help grow our rural economies because local purchasing keeps money within communities.

Consumers are not only interested in how their food is grown, but are also increasingly interested in where their food is grown. Many consumers are becoming more and more interested supporting their local economies by purchasing from local producers. By doing so, consumers also have the opportunity to become closer connected to their food supply and more aware of how it is produced. Additional benefits of local purchasing include the reduction of transportation costs such as fuel and increased domestic food security. For producers, increased local markets reduce risks and increase profitability.

The measure of success for sustainable agriculture in our state over the next 30 years will be an increased number of farms working towards the eight goals listed above and the development of our local food systems in the state. To increase the number of farms growing sustainably, we must provide education and training to producers as well as promotion to increase the demand for sustainably grown products. OSU agricultural scientists should engage in research on sustainable farming techniques that will help identify and develop crop varieties and production techniques better suited for Oklahoma soils and weather. Agricultural professionals and extensionists should offer more educational workshops and outreach to producers who seek to grow sustainably.

In Oklahoma, we also have an increased public demand for locally produced foods. Recent developments in our local food system include the Oklahoma Food Cooperative in which a group of Oklahoma producers and consumers have come together cooperatively to form an organization that facilitates its members purchasing food stocks from one another. Since its inception in November 2003 the Oklahoma Food Cooperative has grown from monthly sales in the amount of \$3,250.00 to sales June 2006 in the amount of \$22,900.00. The rate of increase shows great promise for our state.

The Oklahoma Department of Agriculture, Food and Forestry is responsible for promotion of all agriculture in the state and must be certain to expend even more effort in promoting producers for niche markets such as farmers' markets, schools and universities. Governmental agencies should be provided adequate resources to enforce our existing environmental regulations evenly and across the board.

Another indication of the increased public demand for locally produced foods is the Oklahoma Farm to School Program. Until this year, the program was a pilot project started by the Oklahoma Food Policy Council which consists of a diversified group of stakeholders in the food system and advises the Oklahoma Secretary of Agriculture.

The future of agriculture in Oklahoma does not have to depend only on exports, nor should it include environmental disasters or the pollution of our water resources. We must take a common sense approach to farming and ranching. In doing so, we will maintain productivity and strengthen our communities.

## *Sustaining Oklahoma's Forests*

*Kurtis L. Atkinson, Oklahoma Department of Agriculture, Food and Forestry  
Oklahoma City*

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Oklahoma is positioned at a confluence of ecosystems, resulting in eight million acres of highly diverse forest types, each providing a variety of benefits and demanding a different management approach. Eastern forests of pine and oak provide wood, water, wildlife and recreation, and support significant forest products and tourism industries. Oak-hickory forests of the Crosstimbers offer wildlife and watershed values and are being prized as home sites. Streamside trees protect water quality and offer habitat diversity. Woodlands of mesquite, shinnery, juniper and even remnant stands of ponderosa and pinyon pine reflect variations in climate and topography. Trees “out west” provide conservation values, and our urban forests soften the concrete, glass and steel of city life.

Timber ranks 5<sup>th</sup> among Oklahoma's agricultural commodities, with an annual value of shipments of \$1.8 billion. Generally, the industry follows the State's forestry best management practices and the Sustainable Forestry Initiative standards to assure its operations are environmentally sound. In the past 100 years, most forested sites in the southeast have produced two or three crops of timber, proving its renewability. Trees planted today provide immediate benefits but won't help meet consumer wood demands for 15 years or more.

Over 90% of our forestlands are privately owned with three-quarters held by some 138,000 non-industrial landowners. Sustaining the State's forests and the benefits they provide is not possible without recognizing the needs of private landowners for information, professional assistance and, in some cases, financial incentives.

Fragmentation and its effect on the health, productivity and sustainability of our forestlands is an issue of great concern. Forests have been becoming more fragmented since statehood. Traditional uses of forestlands for wood products

cannot compete with the value of land for recreation or residential development. Forest landowners are increasingly selling their lands for these purposes. This trend is universal, especially in “older,” more urbanized states. As populations grow, more and more people want to own property – to live on or recreate on – thus there are more and more landowners. Smaller tracts coupled with owner objectives that may not include traditional forest uses lead to loss of productive forestlands. Given the trend, future management of landscapes will be more difficult. We need to offer incentives to landowners to retain working forests and develop some approach to manage lands “across property boundaries” while maintaining private property rights.



Human activities strongly influence forest health. Prior to European settlement, Native Americans maintained Oklahoma's ecosystems with fire. Our ecosystems need periodic fire to be sustained, yet fragmentation and urban expansion into rural areas make fire use more complex. Passive land use leads to an influx of invasive species and failure to control invasive species will change our ecosystems permanently. Natural resource issues in the wildland-urban interface are not limited to wildfire risks, but must be addressed as land management and people management issues.

There is a critical need for forest resource data. In 2007, Forestry Services expects to initiate the forest inventory program in cooperation with the U.S. Forest Service. Quantitative data will finally be available statewide, allowing us to monitor forest health and sustainability. The Southern Critical Forestlands Assessment project will help identify important forest areas to target for assistance. Forest Legacy and conservation easements will help maintain working forests with exceptional value. Public funds for sensitive area protection are very limited, so an incentive-based approach is needed.

Most new landowners are urban and absentee. Forestry will be practiced in an arena created by urban politicians and residents unfamiliar with forestry and agricultural practices. State policy should create a positive climate for forestry that will motivate landowners to retain forests, instead of converting them to non-forest uses, and invest dollars in forestland improvement. Private landowners need professional assistance, incentives and rewards for their good stewardship.

Foresters reach one to two percent of landowners annually. Serving a growing, diverse population of owners, most with short-term objectives, will require new approaches in order to sustain the values forests provide. Forest Stewardship offers one way for natural resource professionals to collaborate on management plans for individual owners. The challenge is to provide a larger scale, multi-resource plan to groups of landowners so professionals spend less time in duplicative planning and more time in implementation.

Twenty years ago, few foresaw oriented strand board displacing plywood, or the loss of industrial capacity to process large logs. Future wood-processing plants will use fiber from small trees, re-engineered for specific products. Owner decisions about managing land or retaining lands in forest are impacted by global competition, technology and foggy assumptions about future markets.

Forest products are so versatile it is impossible to have a woodless day. In the future, society will still rely heavily on wood because it is renewable, sustainable and more environmentally friendly than wood substitutes. Wood is half carbon, derived from CO<sub>2</sub> during photosynthesis. Wood products store carbon for the long-term (carbon sequestration). When wood burns or rots, the CO<sub>2</sub> released merely offsets the CO<sub>2</sub> absorbed during its lifetime. We must encourage the use of wood products from sustainably managed forests.

We must balance increased wood use with well-supported reforestation and forest management programs to assure resource sustainability. Forestry is an expensive, long-term investment. Many owners need incentives to invest in forest

improvement. Healthy, productive forests grown by motivated landowners striving to meet their personal objectives contribute significantly to the State's economy and provide public benefits in wildlife, recreation, clean air and clean water.

These intangible benefits have real value. Compensating landowners for these "ecological services" will encourage retention of forests. For example, water is a precious resource and forested watersheds provide high quality water. Cities that benefit from this clean water could help landowners implement forestry practices or keep lands in forest for their watershed values. Isn't it more cost-effective to help landowners improve the watershed than it is to build more water treatment plants or clean up erosion?

Trees in our communities are essential "green infrastructure," not simple amenities. More urban foresters are needed to manage community forests and convince planners to retain components of native forests as cities expand. Climate change will affect our forests for the long-term, and canopy cover for human comfort and energy conservation will be highly valued. Planting and maintenance practices must adapt to climate change and water-use restrictions to help city trees thrive. Raising public and landscape industry awareness of adapted species and improved cultural practices is critical to urban forest health.

Using trees to solve conservation problems without impacting native ecosystems will contribute to the sustainability of production agriculture. Examples include odor control around confined animal facilities, riparian area restoration, energy conservation and renewable energy sources on farms and ranches.

Education of landowners and the public has consistently been identified as a high priority. We must raise the awareness of landowners (forest or agricultural, rural, interface or urban), our children and the public at large about the contributions of trees to a healthy environment and a healthy bottom-line to assure our forests and the services they provide remain plentiful for future generations.

## *Sustainable Agriculture: A Farmer/Rancher's Perspective*

*Jim Esbenshade, Esbenshade Farms  
Colbert*

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I have farmed and ranched 1,222 acres in southern Oklahoma since 1973.

We cleared the land, built fences, constructed 12 erosion dams and 18 miles of terraces, and built a complete farmstead. We farm half of the land and use the rest as pastureland. To cut expenses ten years ago, we started using municipal wastewater treatment sludge as fertilizer on grassland, and then added biodegradable grease from restaurants and food-processing plants.

After some research, I built and developed an aerobic digester lagoon to separate grease and oil, some of which can be used as a bio-diesel fuel and feedstock and the rest as organic fertilizer. We process several millions of gallons a year. We no longer buy commercial fertilizer and are looking into making our own bio-diesel. These savings have greatly improved our profitability.

Farmers and ranchers need not rely on increasingly expensive fossil fuels; we can raise canola and soybeans and recycle organic waste to produce biofuels and fertilizers.

I am also concerned about water and soil conservation. Conservation is even more important to sustainable agriculture and food security today than it was a half-century ago; yet, we are decreasing our commitment to conservation programs.

I am disappointed that money we spent over the last 50 years to build flood control dams and terraces is being wasted because these structures are not being maintained by farmers, ranchers, and other landowners. Dam failures will cost millions of dollars in property value losses and lives. We need to avoid the mistakes made in New Orleans.

How many more dam and dike failures will it take before we take action? People have forgotten that these flood control structures were built to protect farmers and ranchers from flood damage.

We also should reduce the use of chemicals in farming. Long-term application of chemicals causes decreased earthworm populations and humus accumulation. We need cost-effective alternatives that use natural fertilizers such as feedlot, dairy, poultry, swine, and food processing waste, which would reduce both reliance on



chemical fertilizers and environmental impacts from the treatment and disposal of these wastes.

Research and extension activities should be conducted to educate farmers and ranchers on the proper application and use of such fertilizers and their economic and environmental advantages.

Ranchers and farmers should recognize that shortcuts and quick investment returns will produce long-term reduction in productivity, profitability, and quality of life. If we don't move toward sustainable means of agricultural production and land management, I believe we will become increasingly dependent on other countries for our food supply.

We need enlightened policies that encourage sustainable farm practices and then follow up these policies with commitments to change behavior.

Agricultural reform may cause food prices to climb, but that is the cost of long-term food security. Otherwise, decreasing production coupled with increasing demand will no doubt lead to food shortages, lowered quality of life, and higher prices.

I conclude this paper with a suggestion on how we can measure progress toward a more sustainable and secure agricultural future. Food security requires adequate supplies of clean water and fertile soil, thus protection of these precious resources is essential. Their protection is assured through the proper application of natural fertilizers, recycling and reuse of waste products, substitution of chemical pesticides with improved crop management strategies, effective controls to minimize soil erosion, practices designed to enhance soil moisture, and setting aside of conservation easements.

Ultimately, the success of these practices should not be measured by their *rates* of deployment but rather by the *outcomes* of their deployment. In other words, we should implement programs that measure soil depth, soil fertility, and water quality in streams that receive agricultural runoff. Farms and ranches that maintain or improve these parameters should be rewarded. Those operations that continue to operate in a manner that erodes topsoil, reduces soil fertility, or pollutes receiving streams should not be rewarded.



## *The Water Supply in Oklahoma*

*Duane Smith, Executive Director, Oklahoma Water Resources Board  
Oklahoma City*

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Almost 1 billion gallons of surface water - Oklahoma's primary source of supply, most frequently for drinking and related public water needs - is consumed each and every day. In addition, farms, ranches, cities and industries pull about 774 million gallons of water each day from groundwater sources. Our waters truly provide the lifeblood of Oklahoma's economy and through the Oklahoma Water Resources Board, the state's water agency, this resource is managed and protected in the public's interest.

Just 70 years ago, Oklahoma was in the midst of the Dust Bowl, perhaps the worst environmental/weather disaster in the nation's history. In the interim, largely as a result of that event, widespread water development, conservation and planning have made Oklahoma a state rich with water resources. With construction of Grand Lake O' the Cherokees in 1940, Oklahoma embarked on an impressive journey of development that ultimately led to construction of more than 40 large multipurpose reservoir projects. (Before Grand Lake, only five major water projects existed in the state.)

Today, these lakes provide much of the water required for municipalities and industry, irrigation, hydropower, recreation, and numerous other purposes. These large impoundments also prevent hundreds of millions of dollars in potential flood damage every year, and the 445-mile-long McClellan-Kerr Arkansas River Navigation System, completed in 1968, provides a source of barge transportation for 13 million tons of cargo annually.

In the last half century, Oklahoma has not only continued this prodigious water resource development, but state leaders have established and improved laws encouraging the intelligent use

of both surface and groundwaters. The state also conducted a major planning venture that resulted in publication of Oklahoma's first comprehensive water plan in 1980 and an update of the plan in 1995. And from a mere \$25 million investment in 1983, the State Legislature established the OWRB's Financial Assistance Program, which has directly funded more than \$1.5 billion in water and wastewater facility improvements throughout the state.

Despite the high regard we have for Oklahoma's water resources and our best efforts to harness water's countless benefits, each year about 34 million acre-feet of unused water - or about 83 million gallons per day - flow out of the state through the Red River and Arkansas River basins. Annual lake evaporation ranges from 48 inches in far eastern Oklahoma to 65 inches in the southwest, numbers that far exceed the average rainfall in those regions. These facts serve as constant and important reminders that we need to manage our water wisely while we have it.

Population growth, competing water interests among a multitude of users, and increasingly stringent state and federal regulations are putting a severe strain on our supplies as well as the costs required to deliver water to the tap. Individually, we consume more water than ever before. A century ago, the average American used about 10 gallons of water per day to drink, cook, clean, and bathe. Today, we use 100 gallons.

Our waters are threatened by runoff containing excessive sediment and elevated levels of nutrients, chemicals, and other pollutants, including natural chlorides (salts). Thousands of wells tap water from deep within the Ogallala Aquifer to support farms and ranches throughout western Oklahoma, but this use far exceeds recharge in most areas.

## *The Lakes, Streams and Rivers of Oklahoma*



Drought also takes a toll on our water supplies. An examination of Oklahoma's rainfall history suggests a prevailing wet/dry cycle of about 10 years with particularly damaging droughts visiting the state during the 1910s, 1930s, and 1950s. Since about 1980 the state has enjoyed an extended period of relatively moist conditions. This period of prolonged wetness - to which many Oklahomans have grown accustomed and now consider "normal" - is unmatched in state history.

It is clear that Oklahoma is subject to substantial climate variability and we must be prepared to deal with its considerable and potentially detrimental impacts upon water use and storage. Fortunately, with world's finest weather research facilities, Oklahomans are uniquely positioned to improve our understanding of frequently extreme weather patterns and maximize our preparedness to deal with prolonged water shortages and drought episodes.

As Oklahoma approaches its centennial anniversary in 2007, Oklahomans will again be

reminded of the important role that water has played throughout the state's history. The previous century's gains, however, will be outweighed by the monumental water supply challenges awaiting us in the next century.

In light of rapidly changing policies and priorities, "sustainability" will be the buzzword of the next century in water policy and growth analysis. Specifically, as we identify water requirements and develop collaborative plans to deal with future growth, we must seek to balance that growth with environmental protection and preservation of valuable habitat.

Existing state water law should be reevaluated, not only to identify measures that can be used to provide water for required environmental needs, but to better accommodate the interaction between groundwater and stream water in the water budget and appropriation processes. Concerning Indian water rights policy, Oklahoma should work in concert with Congress, federal agencies, and other states to build upon successes of the past two

decades and reach a settlement that reconciles the rights of Oklahoma's general water use sector with those of Native American tribes.

Water conservation will always play an important role, but of perhaps greater importance is how we manage our future supplies. As our reservoirs continue to reach the end of their designed lifespan, maintenance of our existing sources of water supply becomes even more critical. In considering the potential construction of additional water storage projects, we must become more selective due to geographic and environmental limitations.

We must continue to fund research into economically feasible technologies, such as water reuse/recycling and desalinization, which show promise in augmenting limited water supplies. And it is imperative that we increase funding for water data collection programs, which are vital to sound water supply management decisions.

Over the next half century, the state's growth could be limited if we do not adequately fund the maintenance and rehabilitation of our water systems. The infrastructure required to deliver water to Oklahoma's homes and businesses is aging at a rapid pace. According to the U.S. Environmental Protection Agency, Oklahoma's water and wastewater facilities will require \$5.4 billion in rehabilitation and new construction to meet public needs, and that's just through 2025.

Growth will come to a standstill in Oklahoma, especially in rural areas, if we fail to keep pace with the many deficiencies in our crumbling water and sewer systems.

Oklahoma requires an updated and visionary statewide plan to protect, manage, and preserve water supplies throughout the next 50 to 100 years. While the *Oklahoma Comprehensive Water Plan*, originally developed in 1980, represents an

important milestone in the state's overall planning strategy, the state requires system-level plans that feature updated assessments of current water supply and long-term water needs, including infrastructure. Potential water management strategies, including development of additional water supplies and regionalization of facilities, should be identified that will best meet the future needs of customers, even during drought conditions.

As part of the first phase of an updated state water plan, the OWRB will soon conduct a statewide assessment of water supplies and infrastructure, including projected needs. Because the plan will require local governments to play a larger role in assessing and responding to the water-related impacts associated with growth, phase two will rely heavily upon Oklahoma's regional substate planning districts—working in tandem with communities and rural water systems—to identify infrastructure and management improvements required to get water to areas in need. The final phase will draw upon the expertise of Oklahoma's foremost water experts from water use sectors, local, state and federal governments, and universities to develop policy recommendations for consideration by the State Legislature.

Resolution of Oklahoma's future water supply problems will occur only through a refocusing of priorities and resources. Individually, we can conserve water and influence local decisions. As a state, we can plan and take a hard look at how we manage our water. Oklahoma's water laws are effective, but should they be more flexible and conservation-oriented? How much regulation is too much regulation? If we shift water use priorities to environmental protection, how much growth should we or can we allow before we start turning off the taps? It is in Oklahoma's best interest to prepare ourselves by formulating creative solutions to avoid insurmountable problems.

## *Clean Air Everywhere*

*Eddie Terrill, Director of Air Quality, Oklahoma Department of Environmental Quality  
Oklahoma City*

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At the present time, the entire state is in compliance with the federal air quality standards. However, this does not mean that we can declare victory and scale back our air programs. The federal air quality standards are required to be reviewed every 5 years by the Environmental Protection Agency (EPA) and there is pressure to lower the standards and make them more protective of public health as the science becomes more evolved relative to the public health risk of air pollution.

The Department of Environmental Quality also holds the belief that economic growth is essential to the overall well being of the state and it has been our experience that a good economy is good for the environment as there is more money to be spent in the private sector relative to the environment when the economics are good.

However an expanding economy also means there is additional pollution that must be accounted for and it becomes more important that we are able to effectively analyze the affects of this additional burden on our air shed. Thus there are both federal and state reasons why an effective state air quality program is important which I will amplify on below. The technical and political complexities of air quality protection make it impossible to go into any great detail given the limited scope of this paper and this forum.

I will attempt to give you my reasoning why it will be important to maintain a strong state program in the upcoming years and also give you an idea of a voluntary program that is currently gaining a lot of interest nationally and may be something we would want to consider funding in Oklahoma next legislative session.

Air quality management is designed to be a partnership between the federal EPA and the various state and local programs. However, it was always contemplated by the federal Clean Air Act that air pollution prevention and air pollution control is the primary responsibility of State and local governments or in Oklahoma's case the Department of Environmental Quality. Theoretically, the headquarters portion of EPA should analyze national trends based on information supplied to them by state/local programs and from that develop rules and regulations for the national control of air quality using the Clean Air Act and any changes authorized by Congress as a blueprint. The state and local programs implement these federal requirements along with any other requirements they might enact dictated by their own unique state specific issues.

The 10 EPA regional offices should then provide technical support to the state and local programs within their respective jurisdictions as well as federal oversight to insure that a level playing field relative to implementation of the federal rules is maintained. Funding for our activities come from fees charged to our major and minor air pollution sources (private sector), federal grants from Congress to administer the federal programs and state appropriations. In the next fiscal year we will obtain 67% of our total funding from major/minor sources, 19% from federal funds, and 14% from

state appropriations. It doesn't quite seem right that while virtually all of our requirements come from the federal government, we receive less than 20% of what we need to carry out those requirements. However, there are very valid reasons why it is vital that we continue to find ways to fund the state program.



The protection of air quality for our citizens should be without political influence. However, over the past fifteen years the federal EPA has moved toward a very political organization, sometimes to the exclusion of the science. This is not good for either the public or the regulated community. Political pressures to move these programs to the right or left come and go but the science behind what is necessary should remain constant or sharpened as technology gets better. Our regulated community deserves certainty as to what is expected and technically valid reasons as to why requirements are made of them so that money spent on control technology is not wasted over-controlling pollutants. Our citizens deserve to be confident that we as regulators are not requiring industry to spend money unnecessarily driving up costs that are passed along to the consumer but on the other hand are confident that we are doing everything we can to insure that we are wisely providing the oversight necessary to maintain a clean environment. We have an opportunity as a state agency to influence public policy at the federal level through our state/federal partnership.

Our responsibility is to help EPA understand the value of being consistent in their rulemaking regardless of the political pressure and provide them with solid technical advice and reasoning as they move forward with their various rulemaking responsibilities. We can only do this if we maintain staff that is well trained and technically proficient. Our success can be measured in part by our ability to influence EPA to make better more informed decision in regulating pollution on a national level that translate in our maintaining compliance with all of the public health based national air quality standards while having an expanding state economy.

Most people involved with air quality regulations, think of a command and control scenario which the federal and state agencies provide a regulatory framework that industry must adhere to or risk some sort of punitive action being taken for noncompliance. The Department of

Environmental Quality is part of the Blue Skyways Collaborative consisting of federal, state and private sector partners whose goal is to improve the quality of life in North America's Heartland by reducing air pollution through voluntary collaboration and innovations in fuel and energy use. One of our major goals is the identification of one time money to be used for matching grants that would allow public and private truck and bus fleets to replace or retrofit older dirtier diesel engines with cleaner technology.

This could be accomplished via grants from federal sources or private foundations or as a specifically earmarked appropriation from the Oklahoma Legislature in the next session. These programs have the affect of reducing our children's exposure to the particulate matter and other harmful emissions from their school buses or the exposure of our citizens to the same harmful emissions from their neighborhood trash truck. Examples of these types of modifications could include a switch to cleaner fuels such as ultra-low sulfur diesel, biodiesel, liquid petroleum gas or compressed natural gas.

It also could include retrofitting existing diesel engines by installing emission-reduction technologies such as particulate filters and oxidation catalysts. This could also dovetail with voluntary programs our two largest metropolitan areas, Oklahoma City and Tulsa, will be involved in within the next few years designed to keep them in compliance with the national standard for ozone. It will be very easy to quantify the success of our program by calculating the emissions from the trucks or buses before fuel switch or retrofit and the emission afterwards.

The protection of Oklahoma's environment is the primary goal of the Air Quality Division of the Oklahoma Department of Environmental quality. Hopefully, you now have some idea of why an effective state program is essential from both the traditional command and control model to the voluntary type programs that can be effective as well.

## ***Responsible Land Use***

*Robert Gregory, President, Land Legacy, Inc.,  
Tulsa*

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In identifying topics to be addressed through various essays intended for this publication, land use was originally identified as a separate topic. After further consideration, though, it became apparent that land use was too broad to address in a single essay. For example, sustainable farming is reliant, at least to a degree, upon the availability of prime soils for agricultural uses. For our state to transform brownfields and superfund sites into productive lands, a suitable land use must be identified in anticipation of the land's remediation.

Virtually every topic within the environmental section of this publication is significantly dependent upon examination and consideration of relevant land use issues. Whether environmental objectives are best achieved through regulatory means or conservation measures, land use is in nearly every example a necessary result or a potential implementation tool.

Currently, Oklahoma is losing roughly 35,000 acres of agricultural land each year to urban sprawl and other forms of development. About a third of this total is prime soils – those lands best suited for the production of crops or cattle grazing. As we explore means of promoting sustainable farming in the next 30 years and beyond, preservation of prime farmland is an important, if not essential, requirement. Though new and innovative farming techniques exist and will emerge for lands with poor or marginal soils, a thoughtful approach to promoting sustainable farming will undoubtedly include conservation of our best agricultural lands.

Urban sprawl is the most significant cause of the loss of productive farmland. Further, sprawl reduces wildlife habitat, impacts air and water quality, creates new demands for outdoor recreation opportunities, and increases the costs of public services. Repeated studies indicate that

communities throughout the nation pay more to provide public services to accommodate sprawl than they receive in increased tax revenues. Increasingly, cities across Oklahoma are reexamining land use planning and employing it as a means of achieving environmental benefits, rather than simply a tool for organized growth. For example, the City of Norman has developed plans for the creation of a greenbelt that will help control sprawl, preserve working farms, protect water quality, and provide outdoor recreation opportunities. During Oklahoma's second century, such progressive municipal planning efforts will hopefully become common.

Clean air is generally considered primarily a regulatory and technological challenge. Industries characterized by high levels of greenhouse gases will likely be faced with increasingly stringent requirements to reduce emissions to achieve clean air standards. Sometimes overlooked is the positive impact on air quality of forest lands, grasslands, and other land uses that help to remove carbon from our air and capture it in flora and in the soil. A comprehensive strategy for improving air quality will be most effective if carbon sequestration through land use planning is incorporated.

Water quality is also best achieved through a combination of various techniques including land use planning. Government controls and restrictions regarding the release of chemicals, nutrients, and other agents into our lakes, streams, and aquifers will continue to protect our waters in the next 30 years and beyond. Proper land use techniques are also required to achieve optimal results, including the creation of riparian buffers that can capture up to 80% of surface-level contaminants from entering waterways. Conservation of riparian lands, wetlands, and

recharge lands can also be an effective tool for reducing water treatment costs.

Across the nation, brownfields and former superfund sites sit idle despite significant investments in their remediation and cleanup. Lingering concerns over liability for potential landowners combined with staggering liens to help offset cleanup costs are generally cited as the cause for these sites' prolonged inactivity. Thoughtful land use planning, however, can aide in the process of converting these once-contaminated sites into productive lands once again. A prime example can already be found in Oklahoma City that may serve as a model for future efforts. There, the Oklahoma City Planning Department has negotiated a deal whereby the EPA will release the liens on a superfund site if the landowner donates the property to a nonprofit organization. The Planning Department has already recruited a new owner for the land and an intended reuse that falls within EPA cleanup standards. Such innovative, up-front land use planning will help to ensure that this site once again becomes productive and that the significant investment of public resources for its cleanup will be money well spent.

Examples abound across the state and within this publication of more traditional and proven uses of land use planning and implementation to achieve important environmental benefits. Notably among these is land conservation for the purpose of protecting habitat for threatened and endangered species and ecosystems. Historically, public agencies and nonprofit organizations have addressed the need for habitat protection through land acquisition and proper land stewardship. Increasingly, these agencies and organizations are working cooperatively with private landowners to promote land uses and management techniques that accommodate existing activities such as farming and ranching while enhancing critical habitat values. This cooperative land use approach can produce important habitat protection results and over much larger amounts of land, as cooperative approaches are significantly less expensive.

Outdoor recreation is an obvious land use that is increasingly recognized for its multiple benefits to society. In addition to enhancing the quality of life, outdoor recreation, as with many other forms of smart open space protection, can produce significant economic benefits, from greater tourism to increased property values. Further, consideration of environmental concerns such as water quality, wildlife habitat, and even reuse of brownfields and superfund sites when planning for outdoor recreation can lead to multiple societal benefits and cost reductions. As Oklahoma moves into its second century, outdoor recreation will hopefully play an even more significant role in our state's environmental planning and strategies.

Measuring planned land use is simple, though measuring its effectiveness is vastly more complicated. Planned land use can generally be measured by the number of acres employed for various purposes, from farm and ranchlands conserved to riparian buffers established. More importantly, though, we must develop means of measuring the effectiveness of such efforts. Land trusts and public agencies can effectively block new development from occurring on lands with prime soils, though true success occurs as these lands remain productive as farms and ranches. Measurement techniques for land use planning efforts must therefore include both the amount of land affected and the consequences of the desired land use.

As Oklahoma prepares for its second century, planned land use can and should be a primary tool for addressing the myriad of environmental challenges and opportunities confronting us. By thoughtfully including land use planning when developing environmental strategies, and by carefully crafting and employing appropriate measurement techniques, we will more effectively achieve our environmental goals and objectives for the benefit of future generations of Oklahomans.

## ***Water Quality in Oklahoma***

*Jon L. Craig, Division Leader, Water Quality, Oklahoma Department of Environmental Quality  
Oklahoma City*

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As Oklahoma approaches its one hundred year birthday, the severe drought conditions currently being experienced by many portions of the state will cause citizens to reflect on our short history and to ponder our future, with the recognition of the important influence of water on both.

In the years prior to the opening of Indian Territory for “white settlement”, much of the central portion of the United States was considered to be the “Great American Desert”, rather than the “Great Plains”, as it is more properly known today.

This central portion of the nation was viewed by many as a dry, desolate area with little available water, and most of that being brackish and unfit for consumption by man nor beast.

The majority of the early pioneers crossed the “Great American Desert” as rapidly as possible heading for the west coast, where rainfall was abundant and water was cool to the lips and refreshing to the spirit. The only members of these bands of travelers who remained in this region were those who passed and had to be buried beside the trail. In fact, this section of the nation became the “dumping ground” for Indian tribes basically because no one else wanted to live here.

In the 1880’s, most of the remainder of the nation was already settled and almost all public lands had been claimed. The surplus lands of Indian Territory were opened to “white settlement” simply because no other land was available for a growing nation and there was a demand for “free soil”.

Early settlers to central Oklahoma assumed that rivers were for transportation and steam powered boats were placed in the Canadian River to carry passengers on excursions between Oklahoma City

and Shawnee. Other ambitious entrepreneurs constructed small electrical generating plants on the Canadian River near downtown Oklahoma City with the intent of lighting the streets, homes, and businesses with Edison’s new invention. Neither of these ventures was particularly successful.

While the water in the streams in eastern Oklahoma was generally of good quality and frequently plentiful throughout the year, such was not the case for central and western Oklahoma.

The new settler on the flat lands of central and western Oklahoma frequently found that the construction of a hand dug well to provide drinking water for family and livestock was much more critical for surviving the summer than was the construction of a more permanent home to replace the “dirt soddy” for the family to use in the winter. In the summertime, the naturally occurring surface water of springs and creeks quickly dried up or became stagnant and unusable for all but the carp and cricket frogs.

Many of the rivers and streams were not only few and far between, but were also frequently salty or mineralized to the extent to be undrinkable.

Even hand-dug wells frequently could find no permanent water and in some areas, the groundwater that could be reached was found to be high in magnesium or “gyp”. Consumption of such water reduced the need for extra fiber in the diet of the older state citizens.

These water shortages lead to the construction of cisterns to collect rainwater from the roof of the house, to then be used sparingly during the hot, dry summers.

Oklahoma City, born almost overnight with the rapid influx of settlers and merchants, was soon equipped with pipe made of cedar logs bored through the center, and joints sealed with tar or pine pitch. Wells were dug in the terrace deposits along the Canadian River to provide drinking water to the local businesses and residents to replace the rain barrel, cisterns, and dug wells.

Oklahoma, being a rather young state, with many of our cities and towns being fully populated within a few days of opening the area for settlement, really did not have the time to go through the struggling growth that was common in other areas of the nation. As such, pollution of the available water occurred only in limited cases. With water being scarce and highly valued, it was generally protected from pollution by necessity.

Being born “fully grown”, many towns and cities constructed sewage collection and treatment systems within a short time after they were settled.

The few industries that were developed did not contribute significantly to water pollution.

Oklahoma’s rivers were not heavily polluted nor did they catch on fire like what happened with the Cayuga River in Ohio.

Only fifty short years ago, Oklahoma celebrated its semi-centennial with “arrows to atoms” being a major theme in 1957.

As Oklahoma entered that period of celebration, it was just coming out of a major drought that occurred in the early 1950’s. However, the 1950’s drought paled in comparison to the dust bowl days of the 1930’s.

These cycles of water shortages and periods of abundance have caused most Oklahomans to cherish the value of good water and has resulted in a general attitude that water is precious and must be preserved.

NOW IT COMES WITH A  
LIST OF INGREDIENTS.



During the last thirty years, major improvements have been made in the treatment of wastewater with the recognition that the quantity of water available is finite and that it should be neither wasted nor made unusable due to careless acts of pollution.

With the development of Water Quality Standards to identify potential uses of the state’s surface waters, and the establishment of the expected quality of that water if it is to be used for those purposes, firm guidelines for restoring and protecting the waters of the state were established. The state legislature, in recognition of the importance of our limited water sources, adopted state statutes which required that these Water Quality Standards be observed, protecting Oklahoma’s waters for future generations.

As we continue to go through periodic droughts followed by years of abundant rainfall, and as we grow economically and our economy continues to evolve, our short history has shown that our citizens value our water and will remain active in efforts to assure that it is properly protected and conserved to meet our future needs.

## ***Critical Habitats in Oklahoma***

*Michael Fuhr, The Nature Conservancy  
Tulsa*

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Oklahoma is an amazingly diverse state in terms of habitat types found within its borders. From the forested mountains and ridges in the east, to the tallgrass prairies and crosstember woodlands of central Oklahoma, to the Shortgrass prairies in the west, the state encompasses a tremendous diversity of places that make it a wonderful place to live. And fortunately for all of us, we still have the luxury of intact ecosystems, offering a tremendous opportunity for proactive conservation efforts over the next 30 to 50 years.

Critical habitat for a species can be defined generally as an area or areas within a species range that includes the physical and biological features that are essential to that species' survival. Habitat is often thought of only as the physical part of this definition, but it is so much more complicated than simply a place or tract of land.

For instance, aquatic habitat is more than the riverbed, the rocks and boulders, or the leaves, branches and trees that have fallen into the stream. It is all of these individual components together and includes, of course, the water. Furthermore, the quality and quantity of the water is as important to this habitat as any of the other parts described above. And each of these habitat components are integrally linked to the others.

What these linkages mean is that conservation of critical habitat is not as simple as protecting an individual place or piece of land, especially when you consider a suite of animals that depend on this habitat, such as song birds, that unlike plants have the ability to move great distances.

Conservation requires protecting all the parts of a complicated system and the inter-relationships that exist among them. Aldo Leopold once said, "If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, had built something we like but do not understand, then who but a fool would discard seemingly useless parts?"

Does this mean that conservation is impossible? Absolutely not. It means that we collectively need to think big. And thinking this big means that conservation of Oklahoma's landscapes and rivers at the appropriate scale necessary to truly make a difference will only happen if we all work together. Only through partnerships can we reach this lofty goal in a manner that takes into account local economies and cultures.

The fact that most conservation in this state can be accomplished in a proactive manner bodes well for the future of Oklahoma's landscapes; trying to accomplish conservation in a reactive manner in times of crisis rarely leads to anything positive no matter which side of an issue one falls.

Many conservation organizations work together among themselves, and quite often with state and federal agencies that have responsibility for some aspect of conservation. These partnerships are out there and have been successful, and should continue to expand in number and scope.



The real challenge for all of us is to form the nontraditional partnerships that will advance conservation to the next level. This

approach will require, for example, agricultural groups and conservation groups to think creatively in order to form more partnerships aimed at collaborative conservation. This type of cooperation may not be as much of a stretch as you may think; there is a tremendous amount of overlap in the short and long-term goals of these organizations.

These unique ag-conservation partnerships are out there in small numbers, but should continue to grow in number, especially those that involve work directly with landowners. With a vast majority of land in private ownership in this state, conservation of critical habitats will not happen without individual landowners. There already success stories that involve unique collaborations aimed at conserving or restoring quality habitat in ways that may actually benefit the bottom line of an agricultural operation.

A perfect example of this overlap between agriculture and conservation involves the tremendous increase in the numbers of eastern red cedars across western Oklahoma over the last 50 years. Cedars have become ubiquitous across the landscape as a result of fire suppression. Their



*Eastern Red Cedar*

presence reduces the amount of forage available for cattle. At the same time, they shade out many native grasses and forbes, altering the habitat structure of the prairie that many animal species, such as the lesser prairie chicken, depend on. The shared desire to reduce the numbers of these trees is leading to new partnerships, and will certainly foster more in the future as everyone in these groups works together on a regular basis.

Through this type of thinking, we can all play an important role in conservation in ways that work within the framework of local economies. One of the reasons that people and businesses are attracted to Oklahoma is because of the health of the environment’ – protecting this asset protects the state’s future. There are also important roles for corporations to play in this type of collaborative conservation.

The Oklahoma legislature can help by making it easier for these partnerships to happen, and by funding projects, planning, and research that will foster collaborative, innovative conservation. Just recently there were several bills that would increase collaborative conservation. As always, some passed and some did not. The important aspect of this past year is that conservation tools are being discussed, paving the way for more in the coming years.

As we approach the Oklahoma Centennial, let’s not forget that we still have many places that we can use to show our kids what the state looked like in terms of intact habitats 100 or more years ago. Not many states can offer this benefit, especially at the scale we have currently right here in our own backyard. So as we look forward, let’s be mindful to be as proactive as possible, and challenge ourselves to avoid taking this wonderful asset for granted.

## *The Relevance of Parks and Recreation for Our Future*

*Kristina S. Marek, Oklahoma Tourism and Recreation Department*

*Oklahoma City*

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Oklahoma has a layered matrix of park and recreation assets, which make up the system of parks in the state. Providers include municipalities, counties, state and federal governmental agencies, non-profit organizations, and public trust authorities. Each entity plays an integral role in the ongoing availability and growth of the park and recreation environment.

### **History**

The development of the Oklahoma system of parks and recreation occurred in spurts of growth that began even before statehood. In 1901 America's first wildlife preserve was designated by Theodore Roosevelt. It is the Wichita Mountains Wildlife Refuge situated in the ancient glacial mountains of southwest Oklahoma. Also pre-statehood was the establishment of Platt National Park, Oklahoma's first national park, now known as the Chickasaw National Recreation Area, which is celebrating its 100<sup>th</sup> birthday in 2006. These high quality facilities preserve unique resources in Oklahoma and have national significance. So the stage was set for the continued establishment of protected properties for public recreation in Oklahoma. In April 1926 the Ouachita National Forest was established with over 412,000 acres in the Oklahoma segment of the forest.

The State Park service was initiated in 1933, when the Oklahoma Legislature appropriated \$90,000 for the purchase of land for Lake Murray State Park in Carter and Love counties. During Governor Marland's administration from 1935 through 1939, Oklahoma participated in the Civilian Conservation Corps and the Work Progress Administration, providing employment and training for young Oklahomans. From their work efforts, the design expertise of the National Park Service and community and state involvement with land acquisitions, the original

state parks were developed. These parks include Lake Murray, Beavers Bend, Robbers Cave, Osage Hills, Roman Nose, Boiling Springs and Quartz Mountain State Parks. A 1936 report of the Oklahoma State Park Commission states that "...these parks are not confined to any one section of the State, but extend around the entire state and are so distributed that 60% of the population of the state is within 75 miles of a state park where can be found vacation areas and scenic beauty not surpassed in any state in the Nation" (Oklahoma State Park Commission).

Limited park and recreation expansion occurred in the 1940s. The 1950s and 1960s brought additional park opportunities with the development of Corps of Engineers and Bureau of Reclamation reservoirs in Oklahoma. Another extremely important addition in 1964 was the development of the Land and Water Conservation Fund Act. This act provided that off-shore drilling revenues be utilized for natural resource acquisition and development. An apportionment of funds from this program was dedicated for a stateside program that assisted state and municipal park projects throughout Oklahoma. Over 1,020 projects have been developed throughout Oklahoma, touching every county in the state. The Federal investment through the LWCF totals in excess of \$52.8 million and was matched by an equal or greater sponsor match for a total of over \$105 million of park and recreation assets.

This inventory of municipal, state and federal facilities is the backbone of Oklahoma's system of parks and provides opportunities for recreation, from everyday use of a playground or ballfield to an out of doors experience of watching migratory birds, hiking a nature trail or camping.

## Challenges & Opportunities

Though there are many challenges that face parks and recreation in the future, the three predominant ones are protection of the natural and cultural resources, encouragement of outdoor recreation participation and active lifestyles, and consistent funding for outdoor recreation and resource conservation.

Recent research demonstrates that 50% of all Oklahomans have visited a state park within the last 12 months (Jordan, 2005). Visitation to and demands of park facilities are increasing with people staying closer to home. Much of the infrastructure supporting our parks system is aging and an infusion of funds is needed to sustain the facilities and handle added demands. Conflicting uses and visitor desires create situations where carrying capacities are exceeded and the resources are suffering. In some respects, Oklahomans have been loving our parks to death and protective action needs to be taken. Additional park and recreation real estate is needed. About 4% of Oklahoma is available for public recreation purposes, which is a smaller percentage than is common around the nation.

### *Oklahoma Water Acres*

Agency or Level of Government	Land	Water	Total
City Government	38,949	51,530	90,479
School Land Office	2,785	249	3,034
County Government	7	0	7
Colleges/Universities	24,870	4,212	29,082
Grand River Dam Authority	57	69,050	69,107
Tourism & Recreation (State Parks) *	70,987	6,080	77,067
Wildlife Conservation *	765,238	2,120	767,358
Corps of Engineers *	79,680	432,337	512,017
U.S. Forest Service *	249,010	91	249,101
U.S. Fish and Wildlife Service	140,814	0	140,814
National Park Service	7,416	2,346	9,762
Bureau of Indian Affairs	54	0	54
Bureau of Reclamation	7,121	6,070	13,191
Bureau of Land Management	320	0	320
Totals	1,387,308	574,085	1,961,393

\* reported figures include leased properties under the specified managing agency (Caneday, SCORP)

We must continue efforts to educate Oklahomans about the value of public lands and their importance in providing open space, preserving



diverse environments and maintaining portions of our cultural heritage for future generations.

Oklahoma residents are above average in physical inactivity rates, according to the Center for Disease Control. We rank 4<sup>th</sup> among states in adult obesity at 24.1% of adults, and 22<sup>nd</sup> in rate of obese and overweight adults combined at 60% of the adult population (Center for Disease Control, 2005). Childhood obesity and diabetes are also growing concerns about Oklahoma's youth.

Public parks provide convenient locations for play close to home. Kids need active play to maintain physical health and develop social interaction skills. Once the enjoyment of outdoor play is established, it can continue into adult life. With the heightened health emphasis throughout the country, the need for recreation opportunities close to home is increasingly important.

In order to address the need for more public lands which are appropriately maintained and the education necessary for appreciation and use of these properties, a stable funding source is needed. The Oklahoma legislature has recently made tremendous progress in this area for state parks by

authorizing a State Park Trust Fund, which uses funds from mineral extraction activities for preservation needs of state parks. Also, legislative designation of state sales tax and other funds for on-going capital improvement and infrastructure needs will be a tremendous benefit for the future of Oklahoma State Parks.

Some municipalities have dedicated sales tax proceeds for their park and recreation departments. For many communities, one of the major sources of funding to assist recreation development has been the Land and Water Conservation Fund stateside grants program. The level of funding in this program has fluctuated from year to year. In both fiscal years 2006 and 2007, the threat of no funding was present due to federal budget deficit issues and the belief that recreation and parks are less essential than other federal expenditures.

Continued awareness and vigilance by park and recreation users and professionals is needed to assure the on-going viability of the LWCF stateside program. It may be timely for the Oklahoma legislature to consider funding the Oklahoma Recreation and Development Act. This

existing but unfunded program would provide a state financed mechanism to assist recreation development and land preservation.

Public parks remain essential for the quality of life values provided by open space, active recreation, and places to come together to relax and meet with friends. Parks are our memorials to the past and are the places where new family memories are made. Oklahoma has a tremendous collection of park properties but must continue to grow the inventory in anticipation of the resource needs and desires of future generations.

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## ***Conservation in Oklahoma: Out of the Dust and into the Future***

*Clay Pope, Executive Director, Oklahoma Association of Conservation Districts  
Loyal and Oklahoma City*

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Oklahoma, where the wind comes sweepin' down the plain. That phrase is more than just a line from our state song, it's also the image most Americans have of Oklahoma - Hot, Dusty, Windblown.

For some parts of the state, that's true, but this description doesn't even begin to touch the abundance of natural diversity and environmental splendor contained within Oklahoma.

Most of us don't realize the natural diversity of our state. From Black Mesa and the southern plains of western Oklahoma to the cypress swamps of "Little Dixie," Oklahoma contains more distinct ecosystems per square mile than any other state in the Union-only California is more ecologically diverse. Most of us also fail to realize the amount of work that has been done over the last 70 plus years to repair, conserve and improve this rich environmental heritage. That's a shame when you consider how far we have come in conservation and how far we can go.

When we look at the past, it's easy to see where we've been. We've all heard tales of the "Dirty 30's" and the dust bowl storms that would literally turn the day into night. The largest of these "dusters" occurred on April 14, 1935 in an event still referred to as "Black Sunday." On this day a dust cloud swept across Oklahoma and several other states, building strength off of each eroding field, and continuing on to the east coast, eventually coating ships out in the Atlantic with a



layer of dirt that started out as Great Plains farm ground.

While the story of the dust storms is dramatic, it's important to remember that wind erosion was only part of the problem. Water erosion also extracted a terrible cost in our state. The first erosion survey in 1931 estimated that 13 million of the 16

million acres of cropland in Oklahoma at that time had been damaged by erosion. Six million of these acres had gullies and 1.5 million acres were so eroded they had to be abandoned. Lincoln County in the center part of the state received the designation during this time as the most eroded county in the United States.

In an effort to turn this tide of dust, Oklahoma adopted legislation creating local Conservation Districts. An outgrowth of the creation of the Soil Conservation Service, the Conservation District Act (sent to the states by President Franklin Roosevelt), allowed for the creation of local units of government that would act as the "eyes and ears" of conservation. These entities insured local input on federal conservation programs by providing a local board of landowners that would help set priorities for conservation work in their district area. These boards also helped create and maintain local producer "buy-in" to these programs by giving local landowners a voice in conservation and by creating a solid demonstration effort by having the work the local directors did on their land open for all to see. Eventually the entire state was covered with these locally formed

districts and the Oklahoma Legislature took the step of creating the Oklahoma Conservation Commission to help coordinate the efforts of the individual districts and provide a conduit for state and federal funds.

Through the efforts of conservation districts, the State Conservation Commission and the Soil Conservation Service (renamed the Natural Resource Conservation Service to better reflect their mission and scope of activity) the erosion challenges of the 20<sup>th</sup> century were slowly addressed. Anyone questioning this success should consider that 2005 was Oklahoma's driest year ever, but we didn't see any "dusters" like those of the 1930's. Nationwide, USDA recently announced total soil erosion on cultivated and non-cultivated cropland in the U.S. decreased 43% between the years of 1982 and 2003 alone.

Moving away from the Dust Bowl, we should also remember the effects our actions have had on wildlife. With the opening of Oklahoma to settlement, the population of several species of birds, fish and mammals dropped dramatically. Now, due to the efforts of sportsmen and landowners, the Oklahoma Department of Wildlife Conservation (OWDC) reports that Oklahoma fisheries today are probably more abundant and available to anglers than ever before. In addition, OWDC reports that the populations of certain game species such as Wild Turkey and Whitetailed Deer are at record levels.

Similar success can be found in the efforts of the Oklahoma Energy Resources Board (OERB) and their work, funded by oil and gas producers and royalty owners, to clean up abandoned oil field locations. Since the mid-1990's, OERB has restored over 6,500 abandoned well sites. They also have expanded their educational programs, reaching over 750,000 Oklahoma students with their safety and energy curricula.

These successes should all be sources of pride for Oklahomans. That said, more can and should be done. According to ODWC our state has 18

federally threatened or endangered animal species and four species in the pipeline as "candidate species" for listing as threatened or endangered. ODWC also reports that 29% of our fish species are rare or declining, 32% of our freshwater mussel species are considered species of conservation concern and 26 species of our breeding land birds have experienced population declines of 45% or more over the past 35 years.

We also face serious challenges in the area of non-point source pollution and its effects on water quality. Not a day goes by without a news story surrounding the water concerns in the Eucha-Spavinaw Watershed north east of Tulsa or the Illinois River Watershed. In addition to these two areas, approximately 800 stream segments and lakes in our state currently do not meet water quality standards.

The threat of invasive species, both plant and animal, is also a problem we must grapple with. According to NRCS, just one of these species alone, the Eastern Red Cedar, takes over 700 acres of Oklahoma land EVERY DAY. These trees and their cousin the Salt Cedar combine for an average daily consumption of water of over 100 GALLONS PER TREE PER DAY. They also cause increase fire danger, destruction of wildlife habitat, increased pollen count and the loss of millions of dollars each year to agriculture. This is just one species. We also have problems associated with zebra mussels, musk thistle and other non-native plants and animals.

One could also mention the problems surrounding Tar Creek and the largest superfund site in the United States. The state also still struggles with the cost of cleaning up past and current messes from the oil and gas industry. Even though we have had success, Oklahoma still faces challenges with soil erosion and soil health (sediment is still the number one water contaminant in Oklahoma).

So what do we do?

First, we have to educate Oklahomans on the challenges we face in the area of conservation. Most of us know the problems of the past—we simply have to equate this past to today’s challenges (anyone who has had Oklahoma history can’t say that man has little effect on the environment. If they do, remind them of the Dust Bowl). Through education, we can install the ethic of natural resource stewardship in our fellow Oklahomans. If they realize the part they play in addressing our environmental problems, they can take positive action every day, from recycling, to cutting down the invasive species on their property to being more mindful about the amount of water they consume. Also, by educating both adults and children on the need to act, we can build the support base necessary to push policy makers to take the required tough stands on these issues.

With the encouragement of an informed public, policy makers should recognize the importance of protecting our natural resources. While natural resource conservation often takes a back seat to economic development, we need to realize that economic development can’t happen without clean water and clean air. Everything from quality of life issues, to the cost of water treatment, to fights over water supplies, to maintaining a sustainable agriculture sector depends on the health of our environment. Also, Oklahoma has an expansive tourism industry, much of which is based on natural attractions. New economic activities such as agri-tourism, watchable wildlife and other natural resource based recreation also depend on a healthy ecosystem. It’s imperative that our policy makers recognize this and provide the financial resources necessary to address our current environmental challenges.

Locally, cities and towns should readily engage their rural neighbors to work with them on issues that affect their communities. An example of this would be downstream cities partnering with landowners in their watershed to find cooperative solutions to non-point source pollution problems. This idea is not new. New York City treats very little of its drinking water because it made the

decision years ago to work with upstate farmers. Together, the city and its rural neighbors worked to make improvements to the land, including installing riparian buffers and changing manure application practices. While New York City did spend several millions of dollars in cost-share assistance to these producers and in the purchase of conservation easements, the cost was far less than the projected amount that would have been spent to build treatment plants.

If these types of dollars are made available and if the focus from our leaders, like that of New York City, takes a cooperative, locally-led approach, we can address our current and future environmental concerns the same way we addressed past challenges. Recent studies from parts of the Lake Eucha and Illinois River watersheds have already shown that with this type of cooperative approach improvements of up to 30% in phosphorus reduction have happened in less than five years in areas where conservation practices were installed compared to areas that were left alone.

We also have seen success in protecting the Lesser Prairie Chicken in Western Oklahoma, again, not through regulation, but through the cooperative local work of individuals with the support of the state and federal governments. When the state and federal governments provide the assistance necessary to educate landowners on what the problems are and then provide them with the financial assistance to correct the problems, we can make a difference.

The trick is making conservation a priority for policy makers and for those in the private sector willing to donate their time and money. If we can do this and if we take the approach of working with landowners through cooperative, voluntary, locally-led action, instead of through top-down regulations, we will address current and future environmental challenges the same way we addressed the dust bowl. Oklahoma has a proud history in conservation. The challenge is to make our future as proud as our past.

## *Energy in Oklahoma*

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The State of Oklahoma has been an energy state from the beginning. To remain a leading energy state in the coming century the public sector must play a leading role, setting policies that provide an example of wise energy use and production. Beyond example setting, the State must provide a set of guidelines that facilitates sound energy policy in the private sector: show what can be done, and make it possible for others to do so as well.

Although Oklahoma is an energy state, we have no state department of energy. The Oklahoma Secretary of Energy has a staff of two. The Oklahoma State Energy Office, funded through the US Department of Energy and located in the Oklahoma Department of Commerce, has a staff of two as well. Interaction between state agencies on energy issues is ad hoc at best, non-existent at worst. Ideally, an Oklahoma Department of Energy would improve dialogue between state agencies by having an energy coordinator in each state agency that works with the department of energy to promote the state's energy plan.

Energy efficiency is the quickest way to an environmentally friendly energy future. By first reducing energy consumption, it is much easier to meet energy needs with renewable energy and other clean sources. Improving energy efficiency must be the goal of all state policy and programs. Increasing the percentage of renewable energy in the state's overall energy production portfolio is the second, ideally simultaneous, step in an environmentally conscientious energy policy.

State agencies should undergo energy audits on a regular basis to continually improve their energy efficiency. This includes state owned and leased buildings, the state vehicle fleet, and any equipment owned by the state, from computers to air conditioners to heavy equipment. A lifecycle cost analysis approach to budgeting would lead to more energy efficient choices overall. The capital costs of improvements may seem cost prohibitive

in the short run, but the long term savings will save the state many times over in the end. Allowing state agencies to enter into energy service contracts would allow the agencies to pay back the capital costs of energy efficient improvements through the savings on the monthly or yearly energy bills.

State agencies should also actively seek to use renewable energy sources when available. Purchasing Oklahoma wind power through our utility providers is perhaps the simplest means of using renewable energy in state buildings. Increasing the use of ethanol and biodiesel in the state fleet is another simple way to support renewable energy.

Becoming an active participant in the production of renewable energy would show the state's commitment to renewable energy in an even more straightforward way. Oklahoma has excellent wind and solar resources that could be used at state agencies to promote renewable energy awareness.

The welcome centers on the interstate highways should be showcases of Oklahoma's commitment to renewable energy. These centers should leave a first impression of a state that is a leader in energy independence. Oklahoma wind and solar power can provide much of the energy needs of the welcome centers. A renewable energy map should be available that includes renewable energy production facilities and retail locations for biofuels.

The state must provide proper incentives for energy efficiency measures and renewable energy production in the private sector. Energy efficiency and renewable energy use should be encouraged in residential, commercial and industrial settings. Any revision to state and local zoning and land use regulations should take renewable energy measures and energy efficiency of transportation and buildings into account. The state must adopt mandatory building energy efficiency codes for both residential and commercial buildings.

## ***Urban Redevelopment***

*Rita R. Kottke, PhD, Office of Economic Development  
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***“The significant problems we face cannot be solved at the same level of thinking we were at when we created them”. (attr to Albert Einstein)***

Oklahoma’s urban areas were born overnight. People from all over the world found their way to Oklahoma to participate in the Land Runs. Once the dust settled, construction began. Growth was rapid and unplanned. Rampant growth was good; it represented economic well-being and a bright future. However, by the 1970s, an increased awareness of the environmental impact of unchecked growth began to take hold. The natural environment and man’s impact on it began to be examined more closely. Could the earth support an increasingly disposable economy? Is development sustainable? What is the earth’s carrying capacity for human activity? These and other questions spurred the environmental movement and caused a reexamination of man’s future expectations.

One of the major concerns for the future is the increased urbanization of the world. According to City Mayors Society, the world’s urban population is growing by one million people a week. Urban expansion has come under increased scrutiny due to the impact that it has on the environment, natural resources, and quality of life.

In the United States, urban areas grew up and out. Cities quickly became metropolitan areas. The Oklahoma City Metropolitan Area

is Oklahoma’s largest metro area and now covers 621.2 square miles. It continues to expand. Such expansion requires enormous amounts of natural resources, many of which are not renewable. The expansion also threatens native forests, wildlife, and cropland. Expansion also adds to the pollution load in the atmosphere and surface water. Since the world is more conscious of the effects of development, it is time to reexamine the way cities are developed and redeveloped and make substantial changes in order to ensure that urban life is sustainable. Can our cities “meet the demands of a growing human population that has rising aspirations for consumption and quality of life, while maintaining the rich diversity of the natural environment and biosphere” (American Planning Association)?

In the past, city planning in Oklahoma was centered on creating zones that would effectively keep heavy industry out of residential neighborhoods. The problem with zoning is that it

forces families to live in one area of town, work in another, shop in another, and attend leisure activities in another. This results in a major increase in travel time, and in Oklahoma, that means a large increase in vehicular traffic, leading to a rise in pollution and a decline in air quality. It also means that people are more isolated from their community due to the time spent alone in a car, commuting to



various parts of town. To recreate a sense of community, and combat the rising environmental impact of increased traffic, a shift in development priorities is needed. Oklahoma communities must make it a priority to revitalize their urban cores and ensure that the end result reflects livable sustainable communities. Zoning plans should be reevaluated to allow for and encourage mixed use so that businesses, residences, schools, and recreational areas could be within walking distance, which would create a more cohesive sense of community.

The urban landscape represents a large taxpayer investment in infrastructure and a huge private investment in city structures. Every effort should be made to preserve these investments. Urban redevelopment's objective is to ensure that older areas of cities and towns are not allowed to decline into blight. It encourages the reuse of existing urbanized land and the preservation of green space in a manner that can sustain the population while still promoting economic development.

There are many challenges to reusing urban areas. Older parts of cities may have contamination from former gasoline stations, dry cleaners, and other industries that needs to be cleaned up before the property is reused. Issues of the environmental liabilities associated with the contamination must be also resolved. Many older buildings contain asbestos, lead paint, mold, mercury, polychlorinated biphenyls (PCBs), and other contaminants. The removal and disposal of these materials is expensive and financing for these activities is limited. There is also a large conceptual hurdle to be overcome because Oklahomans, like most Americans, are programmed to view "new" as intrinsically better than "old." Another limiting factor to revitalization is that existing buildings are often functionally obsolete and may have to be repurposed. Often, repurposing a building is more expensive than building a new building, especially if the goal is to retrofit the building in a way that is energy efficient. These challenges must be met and overcome in 21<sup>st</sup> Century.

Oklahoma has an opportunity to be a leader in the sustainable development movement. The state is currently experiencing an economic boom and could take actions to ensure that the development incorporates the principals of smart growth, livable communities, green buildings, energy conservation, and sustainability. It should aggressively put policies in place that support sustainable urban redevelopment and discourages further new development on the fringe of communities. Very few limits are set on development in Oklahoma or in the United State in general. Cities allow their urban forests to be developed for fear of losing business and jobs to other communities. Taxpayers bear the burden of extending infrastructure services to new developments while urban centers are allowed to decline to the point of blight. Oklahoma can stop this trend.

The federal, state, and local governments should provide funding to assist developers in overcoming environmental and other impediments associated with redeveloping urban land and structures. The federal Environmental Protection Agency's Brownfield grants and Housing and Urban Development's Economic Development grants provide some financial assistance, but the State of Oklahoma should recognize the intrinsic value of its urban areas, and increase/create incentives for redevelopment of existing urban land. Cities should change their policies to make it more difficult for developers to build on undeveloped land.

Urban areas have been called the engines that drive economic development. It makes sense to ensure that the engine is as efficient as possible. The expanding urban borders do not provide an efficient use of natural resources and is extremely wasteful. If an acceptable quality of life is to be sustained in Oklahoma's urban areas, a shift in the way Oklahoma promotes economic development must occur and a priority must be placed on urban redevelopment.

## ***Water in the Next 100 Years***

*Marsha Wolfe Slaughter, P.E., Director, Water & Wastewater Utilities  
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### **History and Oklahoma Values**

The dirt storms and dust bowls of the 1930s shocked the Great Plains into a virtual desert and scorched the public's opinion of Oklahoma. These acts of nature did much to shape mass sentiment about our state, and these dispositions outlasted the drought. Decades of public debate and social action ensued before Oklahoma broke through the fetters of its parched reputation.

Though gratefully, times have changed, Oklahoma finds itself in the midst of yet another drought. Communities across the state are currently participating in drought management initiatives, and rationing remains a possibility for everyone. But, we have learned that we are not the sum of our adversities, be them acts of nature, man-made disasters or, like the dust bowl, a combination of both. It has taken many years for us to move beyond the crises by which we have been defined. But, today, Oklahoma City in particular, is widely regarded by the social actions its citizens have taken to improve the quality of life in their city – actions that were galvanized by values that do not bend no matter which way the wind blows.

### **Thinking BIG**

One of those values, “big thinking,” was demonstrated as far back as 1900 – before statehood – when Oklahoma City purchased the original water works plant, which had been constructed when the city was still a mere hamlet in Indian territory. More big thinking came in 1915, when citizens voted for the construction of Lake Overholser. Next came the Overholser Treatment Plant.



During World War II, Lake Hefner was constructed, and later, its namesake plant. Many, many examples of big thinking followed: miles and miles of pipeline and tons of brick and mortar — the infrastructure needed to pump, treat and transmit drinking water to a growing City.

### **Thinking REALLY Big**

In 1961 – more than 45 years ago – came the biggest thinking of all. Officials with the City of Oklahoma City took water from Lakes Atoka, Overholser and Hefner and mixed it together in a 55-gallon barrel and poured it upon a dry, dusty hillside in Eastern Oklahoma County. The gesture was ceremonial: the municipality, with a population of about 324,000 people, broke ground on a \$60 million construction project that created Lake Stanley Draper and the Atoka pipeline, and ultimately, supplied Oklahoma City with water for decades to come.

Today, Oklahoma City's population has more than doubled since the completion of the 100-mile Atoka pipeline. On the eve of the State's centennial, the Oklahoma Academy for State Goals has asked the City of Oklahoma City to enter a

paradigm where big thinking is not only encouraged, it is mandatory. We've been asked to consider what we can do as the stewards of municipal water "to make Oklahoma a more prosperous state and a better place to live, work and play." We've been asked to define, specifically, our environmental challenges and how we will meet them in such a way that they do not hinder our economic growth, and moreover, position us to capitalize upon opportunities within various growth sectors.

### **Sustainable Development and the Economy**

Long before the phrase sustainable development was popularized, officials with the City of Oklahoma City took steps to ensure the City could sustain a growing population. Their planning for future generations included harnessing natural resources that were paramount to economic development. This legacy is a guidepost for current leadership as we define steps that must be taken to meet the needs of the present without compromising the ability of future generations to meet their needs. Like those who came before us, we have planned for the windfall of others, including our children and our children's children. We will do this through development and implementation of innovative technologies and a sophisticated workforce, both of which will enable us to better manage our water resources through treatment as well as pollution prevention.

With regard to water, a sustainable environment is not just one that supports industry in harmony with natural resources, but one that addresses quality of life through provisions for recreation and commercial opportunities. Lake Hefner, a drinking water supply, is an example of both, and perhaps the city's best example of a sustainability project – one that has promoted economic development in tandem with nature and recreation. The City will seek to replicate such efforts as opportunities present themselves, particularly around Lake Draper where the City is working toward commercial and recreational development. These projects improve quality of life in our City—something we know a sophisticated workforce values above anything else.

### **Environmental Conservation and the Economy**

The City of Oklahoma City is committed to public policy that encourages efficient use of water. Fortunately, the City has enough water for people to use when they need it, but we always encourage our customers to use water wisely. Of the billions of gallons of water the City provides customers every year, less than 1 percent is consumed for drinking and cooking. Most of our drinking water is used to water lawns, golf courses and perform household chores such as dishwashing and laundry. Thus, we are exploring options for reusing treated wastewater.

"Recycled water" can be used in agricultural and landscape irrigation, industrial processes, golf course watering and toilet flushing.

In addition, we are taking steps to ensure an abundant water supply in the future – one that is competitively priced and operated. This involves working to secure additional, unallocated water rights for McGee Creek and Sardis Lake. We have also taken steps to acquire virtually all of the property in and around Lake Draper for the future construction of the West Elm Creek Reservoir. Planning for future demand also dictates the construction of a second Atoka pipeline, which will run parallel to the original pipeline.

Thus, the question perhaps becomes one more of harnessing existing resources versus conserving those now readily available. These acquisitions require millions, if not billions of dollars – approximately \$30 million for the second Atoka pipeline, alone. This investment is paramount to Oklahoma City increasing its capacity for more industry and more people. Like the Atoka pipeline, our capacity is contingent upon our engineering.

Finally, our biggest barrier to water conservation is public awareness including implementation of water efficient technologies on the part of industry. The City is investing in water education and the promotion of water conservation. However, transforming how the public currently uses and values water will take a long time and we know

our efforts must be continually repeated over the course of many years before we effect changes in behavior.

### **Environmental Protection and the Economy**

A safe water supply is crucial to the future of Oklahoma, and providing reliable, high quality utility services is a major strategy for the City of Oklahoma City. If a city can't ensure the public's safety against potential threats to its water supply it has failed to meet basic human needs, not to mention provide an adequate foundation for attracting industry and growing the economy. Thus, the City of Oklahoma is committed to protecting drinking water from source to tap in the most effective manners possible. But, protecting water costs money, and herein lay the challenge. Security measures necessary to fortify reservoirs, treatment plants, etc., are financially daunting. The cost of operating the kind of laboratory that our City operates – we pull 200 samples every month in an effort to ensure the public's health – is very expensive. Thus, in order to grow the economy we must maintain our investment in environmental protection, which in regard to water is the discipline of public health.

### **Environmental Regulations and the Economy**

The cost of doing business in heavily polluted cities is expensive. Cities that demonstrate ongoing compliance with state and federal laws governing environmental quality have economic advantages over those who don't. However, without sufficient investment, complying with more stringent state and federal regulations will strain our ability to remain competitive in attracting news business.

### **Sharing**

In 1964, when City officials celebrated the opening of the Atoka pipeline, they were flanked by officials from surrounding cities throughout

Central Oklahoma – Norman, Moore and Midwest City, just to name a few. It was evident then that Oklahoma City would be a regional provider of water. Today, we maintain agreements with 13 cities to provide their citizens drinking water when they need it. More cities are pursuing connections with our lines. These are more than adjacent cities.

These are our neighbors, our co-workers, our families and our friends. It isn't just about us. It really never has been, and if we are to remain competitive, economically, it never will be. We must cooperatively share our resources. After all, in a mere 25 years, 1 million more people will be living in Oklahoma and it will take all of us working together to maintain quality of life as we know it now.

### **The Metric**

The metric that will still be relevant 100 years from now, and by which we can measure our progress is funding, but this involves more than cash outlay. It involves comprehensive financial planning that involves big thinking. Thus, we must ask, "What steps will we take to perpetuate the current status quo of Oklahoma City's water supply, which is both ample and safe? What funding will we pursue and allocate to meet the challenges associated with aging infrastructure, compliance, conservation, protection, and the need for new pipeline and reservoirs?"

The big thinking that led to the Atoka pipeline involved far more than the \$60 million it cost the City. It involved the ability to envision an enviable water supply for people to use when they needed it. And, it involved values – believing the people themselves would be here to drink it, despite lingering stereotypes of a dehydrated plain. Times have changed, but only because Oklahoma City had a plan and leaders secured the funding.

## ***Adding Green to Oklahoma's Energy Portfolio***

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The interest in biofuels, primarily ethanol and biodiesel, has been “brewing” for decades. Agriculture sector’s interest has been primarily as a means to further add value to their commodities. The environmental sector has focused on reducing environmental contaminants, especially those due to vehicle emissions. Academia continues to explore/ evaluate methods and technologies addressing critical issues related to the bioconversion process from feedstock development through product marketing. Advocates for increasing the use of biofuels point to the fact that about 65% of the U.S. trade deficit is tied to petroleum as well as national security. The general public’s greatest concern is gasoline prices. Instability overseas plus the ever increasing demand for oil world wide suggests pump prices will likely not decrease significantly in the foreseeable future.

Ethanol is receiving most of the attention because of the sheer quantity of gasoline required to support America’s increasing appetite which today is in excess of 143 billion gallons per year. Current ethanol production is about 4.5 billion gallons per year or about 3% of the liquid fuel demand. This production level also represents about 12% of the total US corn crop, the primary starch grain used in 95% of all ethanol production facilities. Critics to the expanding biofuels efforts argue that using the entire corn crop would provide only about 25% of the liquid fuels needed.

Obviously, using the entire crop of any commodity is unrealistic. Where will the greatest effort be placed in ethanol production? It is cellulosic feedstocks such as perennial grasses, crop residues, and wood wastes. Frankly, the question is’ not whether ethanol production will expand beyond starch-based crops, specifically corn; but rather how Oklahoma agriculture and current/future industries will respond considering the advent of cellulose-to-ethanol conversion technologies.

Even though Oklahoma’s climate is not ideal for corn production, this state has a proven track record of producing large quantities of cellulosic feedstocks in the forms of perennial grasses and crop residues. Approximately 4.5 million acres of Oklahoma wheat are harvested annually with the entire residue returned to the land.

Currently, there is no commercial cellulose-to-ethanol facility in operation in the U.S., though one is currently being designed and scheduled to come online within five years. There is no question that Oklahoma can become a major producer in producing ethanol from cellulose. We have the knowledge-base to support this new industry. This includes existing fuel-producing industries plus research and education institution that are already providing programming in biofuels. We have the capability of providing feedstocks. However, one of the biggest challenges is simply supplying large quantities of feedstock, especially a monoculture, depending on the conversion process. A 50 million gallon per year plant could require over 750,000 tons of biomass. How can Oklahoma attract a company without a guarantee on its raw material? Conversely, how can potential biomass producers be convinced to grow feedstocks without a guaranteed market? Education will certainly be a key factor in bringing all parties together.

The direct benefits of biofuels (ethanol and biodiesel) are many including the economics associated with the construction and operation of bioconversion plants. Each plant could support over 100 employees from feedstock collection to plant operation. Locally, each plant could add a significant boost to rural development. Indirectly, water quality could be improved if marginal and/or highly erosive croplands are converted to perennial grasses.

Oklahoma can position itself to become a national leader in biofuels production!

## ***The Biofuels Illusion***

*Julie Olmstead, Daily Oklahoman, Monday, July 3, 2006  
Salina, Kansas*

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*Olmstead is a graduate student in plant breeding and sustainable agriculture at Iowa State University and a graduate fellow with the Land Institute, Salina, Kan. She wrote this for the institute's Prairie Writers Circle.*

There's been a lot of talk lately about the promise of biofuels — liquid fuels like ethanol and biodiesel made from plants — to reduce our dependence on oil. Even President Bush beat the biofuel drum in his last State of the Union speech.

Fuel from plants? Sounds pretty good. But before you rush out to buy an E-85 pickup, consider:

The United States annually consumes more fossil and nuclear energy than all the energy produced in a year by the country's plant life, including forests and that used for food and fiber, according to figures from the U.S. Department of Energy and David Pimentel, a Cornell University researcher.

To produce enough corn-based ethanol to meet current U.S. demand for automotive gasoline, we would need to nearly double the amount of land used for harvested crops, plant all of it in corn, year after year, and not eat any of it.

The corn and soybeans that make ethanol and biodiesel take huge quantities of fossil fuel for farm machinery, pesticides and fertilizer. Much of it comes from foreign sources, including some that may not be dependable, such as Russia and countries in the Middle East.

Improving fuel efficiency in cars by just 1 mile per gallon — a gain possible with proper tire inflation — would cut fuel consumption equal to the total amount of ethanol federally mandated for production in 2012.

Rather than chase phantom substitutes for fossil fuels, we should focus on what can immediately slow our contribution to global climate change and reduce our dependence on oil and other fossil fuels: cutting energy use.

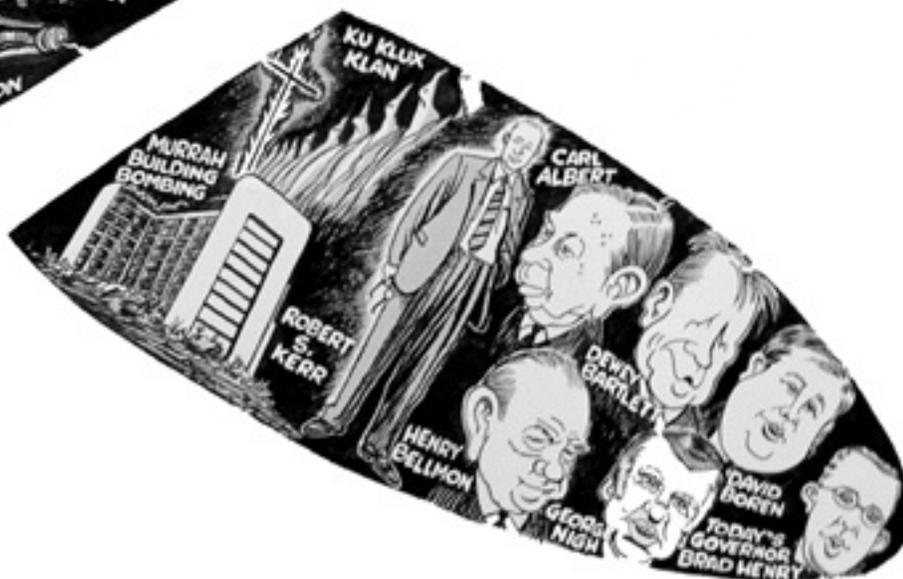
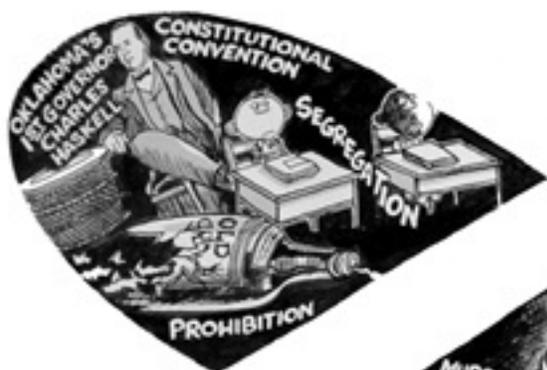
Let's be bold. Let's raise the tax on gasoline to encourage consumers to buy fuel-efficient cars and trucks. We can use the proceeds to fund research and subsidies for truly sustainable energy.

Let's raise energy-efficiency standards for vehicles, appliances, industries and new buildings. Let's employ new land-use rules and tax incentives to discourage suburban sprawl and encourage dense, mixed-use development that puts workplaces, retail stores and homes within walking distance of each other. Let's better fund mass transit.

Let's switch the billions we now spend on ethanol subsidies to development of truly sustainable energy technologies. And why not spend money to make on-the-shelf technology like hybrid cars more affordable? Fuel-efficient hybrids aren't the final solution, but they can be a bridge to more sustainable solutions.

The focus on biofuels as a silver bullet to solve our energy and climate change crises is at best misguided. At worst, it is a scheme that could have potentially disastrous environmental consequences. It will have little effect on our fossil fuel dependence.

We must reduce energy use now if we hope to kick our oil addiction and slow climate change. Pushing biofuels at the expense of energy conservation today will only make our problems more severe, and their solutions more painful, tomorrow.



# *Political Oklahoma<sup>^</sup>Footsteps*

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*Each author in this section was asked to respond to the following question.*

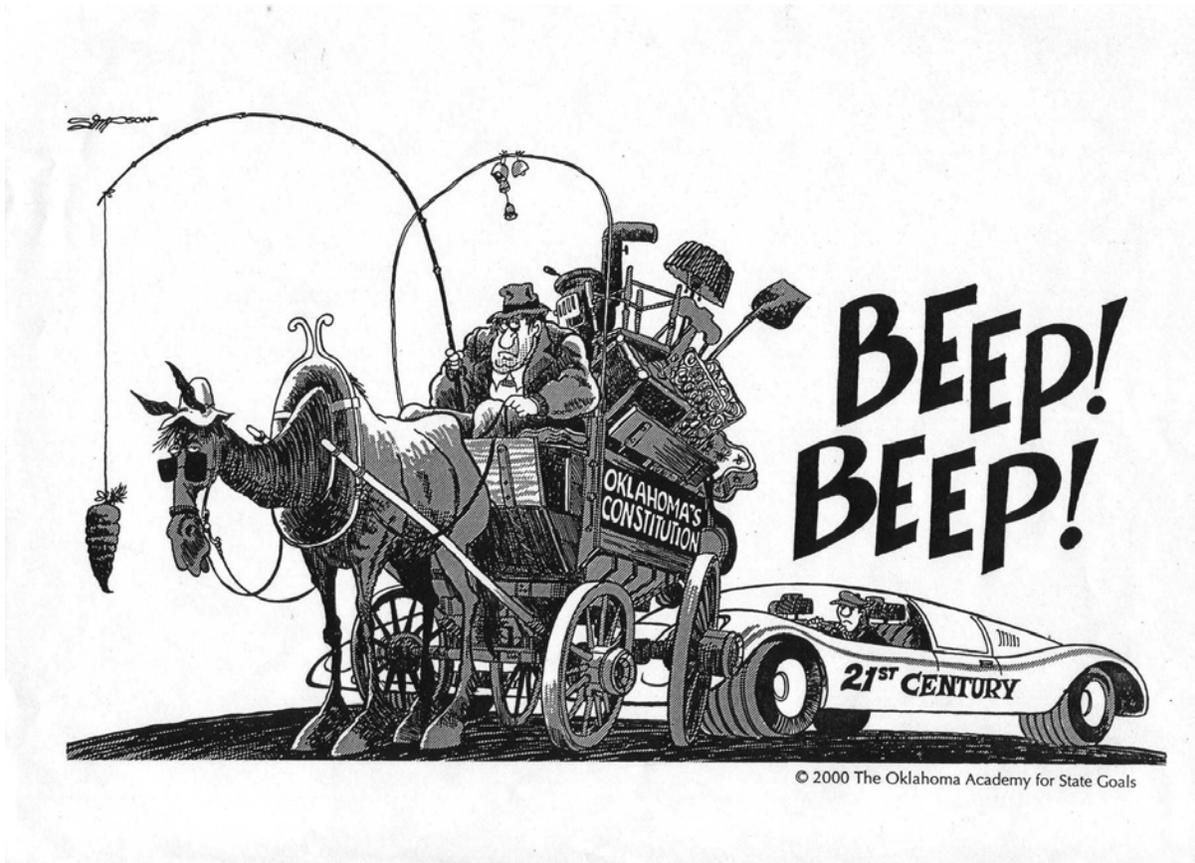
***“Consider the values and attitudes you see in Oklahoma. What are the challenges Oklahoma faces in meeting the political maturity and leadership needed for an economy that will capitalize on the growth sectors of the 21st century?”***

*Each author was requested to suggest the one metric that best measures progress in this area – and explain the importance of that metric. The content is the sole responsibility (and choice) of the author as long as it was responsive to the question. The Academy did not dictate content to authors. Nor did the Academy edit content beyond grammar, punctuation and layout. This section contains those responses.*

***Our State Constitution***

*David Simpson. Oklahoma Academy Conference in 2000  
Tulsa*

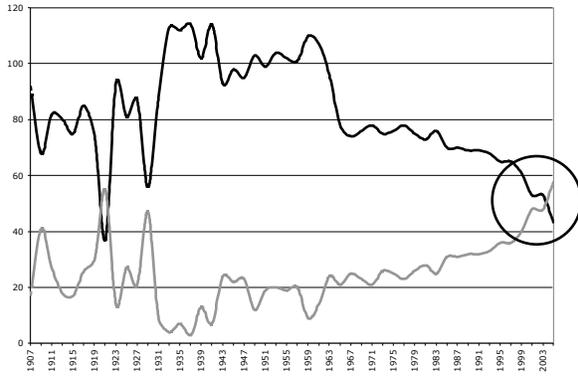
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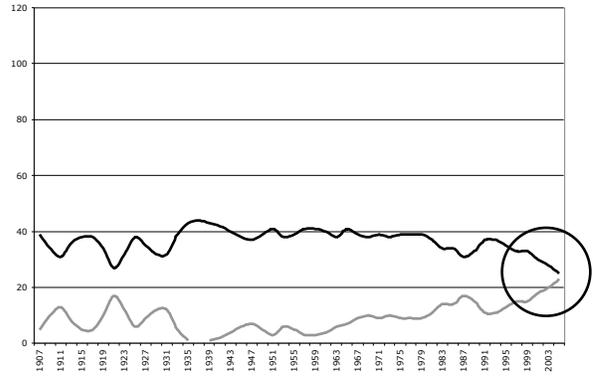
## *Trends Since Statehood*

*Jamie Wade and Jennifer Conatser, Oklahoma Academy Staff  
Oklahoma City*

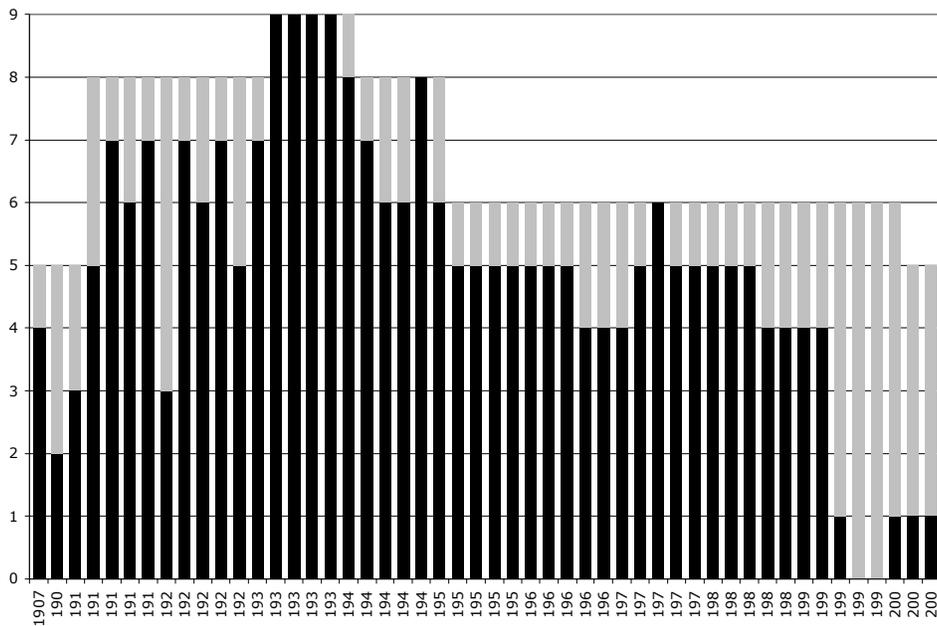
**Oklahoma State House**  
(Black is Democrat - Gray is Republican)



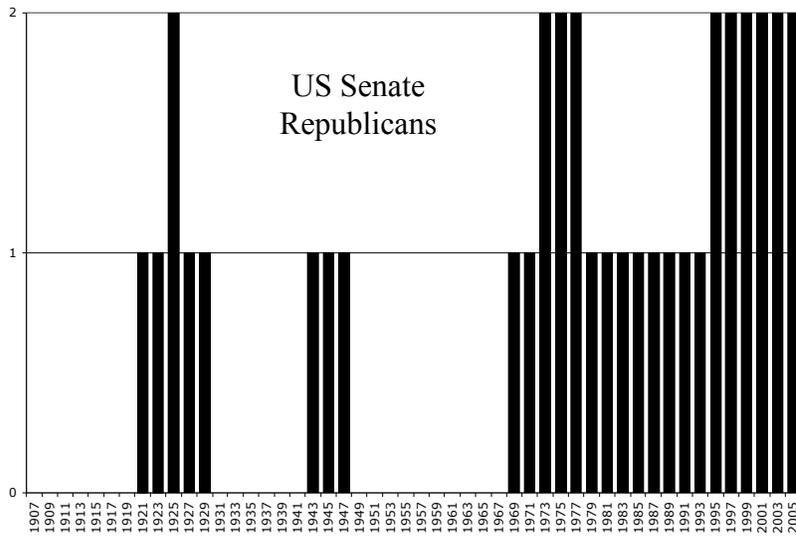
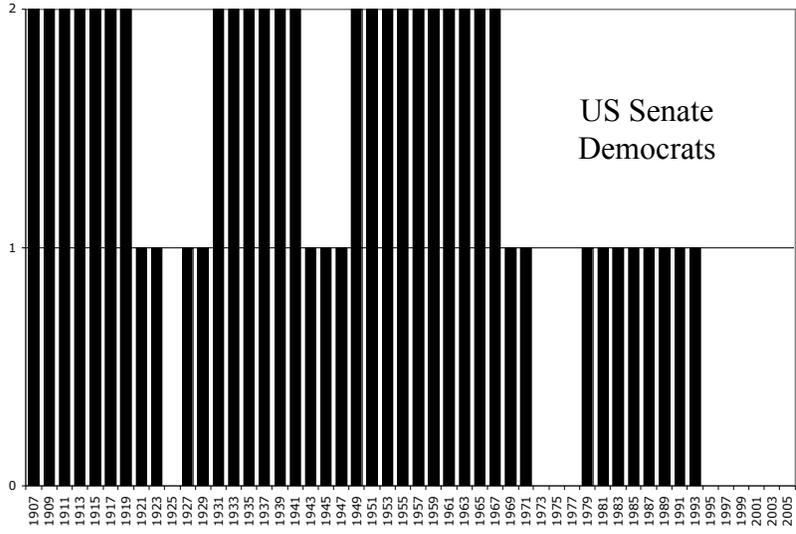
**Oklahoma State Senate**  
(Black is Democrat - Gray is Republican)



**Oklahoma Members of Congress by Party**  
(Black is Democrat - Gray is Republican)



*i.e. in 2005 there were five Members of Congress; one was Democrat and four Republican  
For example, Oklahoma had nine Congressmen in 1933-39 - all were Democrats*



## ***The Purest Form of Government***

*Jon Gumerson, Mayor  
City of Guthrie*

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*Jon Gumerson elected Mayor in May of 2001, to serve on the 56<sup>th</sup> City Council of the City of Guthrie, for a two-year term. He was re-elected for a second term in 2003 and again in 2005. Previously he served a term as Vice Mayor in 1969 and a term as Mayor in 1971.*

***Devils Dictionary - Politics n. A strife of interests masquerading as a contest of principles. The conduct of public affairs for private advantage.***

This, I believe, is a very accurate definition of what politics has become, and, as we all know - "all politics are local". Keeping that in mind, I believe that there are major challenges Oklahoma faces in order to be able to capitalize on the growth sectors of the 21<sup>st</sup> century, but, the major one will be a shift in the way we will have to think about our political environment.

For decades now we continue to deal with territorialism and the unwillingness to work together for the common good. A more equitable shift in decision making from rural to urban also has to occur. So, in order to affect that mind set, we will need to take a more aggressive grass roots level approach to educating the masses, so that they in turn take charge of the political environment.

Being elected does not mean that you now have the authority to decide how things will be done. Being elected means positioning yourself to better affect the change your constituents want. For some reason the constituencies have lost either their interest or have forgotten that they still have the power to direct the growth in



their communities - if they are engaged, or, re-engaged to do so. We have to focus on how we advance the leadership skill sets of these individuals in our communities and for them to lead by example as a result of this personal growth.

Education will also be a key factor in how we move forward with this. One of the largest obstacles I see in the current way we do business is that there appears to be no continuity in anything that is done in most communities across our state. The processes or agendas are in place only as long as the individual is in office. Most of the goals are short term goals, while there may be nothing wrong with that, there is no true effort in working on agendas or goals set by the individual that was in office prior - if they were positive for the community.

I know that when a decision is made to run for office, most individuals choose that time because they want to positively affect change in their communities. With that in mind, we start drafting new ways of doing things and developing new projects instead of looking at what is in place and seeing how we can actually improve on what it is already there.

At the local level, one of the greatest challenges is to get away from making decisions based on information that is provided at the coffee shops. Individuals making comments in these types of settings have no responsibility for how things are done, or for the outcomes of the decisions that are made. Therefore, their information is more opinionated than factual, which instead of providing a venue for further education ends up breeding misinformation and mistrust.



Therefore, our ability to recruit and encourage individuals to get active and involved in their communities by attending council meeting and volunteering for boards and commissions will be crucial as well as having them register to vote. They must understand that they can not have a voice unless they are willing to register and be heard at the polls- it is their civic responsibility to participate.

I touched on education earlier and I strongly believe that it is extremely important that we engage our citizens very early on in order to be successful. The existence of a strong creative and progressive base in all regions will be crucial to the development of a vibrant and healthy economy. This environment, which will be conducive to economic growth, will require the deliberate pursuit of a fundamental cultural shift towards valuing and celebrating knowledge, knowledgeable people, knowledgeable businesses and knowledgeable institutions.

Our responsibility then will be to make sure we provide the adequate exposure to create and develop leadership within our communities. How do we accomplish this? By engaging, leading, and empowering our citizens! I know that most of our communities at one time or another have gone through the process of holding visioning sessions with members of their communities that normally

results in the development of comprehensive plans that are later adopted by their councils.

We need to build on this and engage those individuals by sharing our knowledge of the process and being open to new suggestions and ideas on how to improve, as oppose to continuing to do things the same way we have always done them hoping for different results (“Which is the definition of insanity”).

Therefore, a civic and political commitment to change will have to be accompanied by a branding strategy that results in Oklahoma being perceived as a vibrant, dynamic and innovative state, regardless of whether is in our rural or urban areas.

I am very much encouraged by the work the Oklahoma Academy for State Goals has been able to accomplish. It is crucial that this organization continues to grow so they can continue to be a catalyst for assisting local governments in keeping our state elected officials educated about the true agenda for the state. Local government remains the purest form of government despite the stigma and nature of a political environment.

Develop, Execute, and Manage. always watching out for critical sign post in order to modify the plan in order to meet the upcoming challenges.

## ***Strategies for Our Second Century***

*David Walters, former Governor, State of Oklahoma, 1991-95  
Canute and Oklahoma City*

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*Governor David Walters served from 1991 to 1995. Born November 20, 1951, near Canute, Oklahoma, in Washita County, Walters is the son of Harold and Evelyn Walters. He graduated as valedictorian from Canute High School in 1969, and from the University of Oklahoma in 1973, with a Bachelor's degree in Industrial Engineering. In 1977, he earned a Master of Business Administration from Harvard University.*



Teachers' salaries are 50<sup>th</sup> in the country, and spending on mental health care is 46<sup>th</sup>, resulting in tragically few services for the mentally ill. We lead the nation in uninsured citizens and poverty.

If a well educated and healthy citizenry is essential to improving our overall standard of living, let's assume that we have some serious roadblocks to our future development.

*On November 6, 1990, Mr. Walters was elected to serve as the 24th governor of Oklahoma. During Walters' term, education funding increased by approximately 30 percent, and a \$350-million bond issue for higher education-the first in 25 years- brought construction and renovation to every state college campus.*

I was recently asked to address a forum hosted by The Oklahoma Academy, Oklahoma's premier citizen based bipartisan public policy development group. I was asked to share my perspective of what Oklahoma should do in the future to be a better educated, healthier, more prosperous state, one that is able to compete in a global economy.

### **Do We Have a Problem?**

Even an interested citizen may have trouble answering this question. As always, we have incumbent politicians telling us everything is fine or improving, yet we have their challengers telling us things are terrible.

The facts are troubling. Oklahoma has lost 30,000 high paying manufacturing jobs in the last 36 months, led by the closing of the GM, Lucent and Delta Faucet plants. Another 1,400 jobs are in jeopardy at the Dayton Tire factory. About 40,000 Oklahomans are paid the minimum wage of \$5.15 an hour, an effective wage of only \$3.40.

### **What is the highest priority solution to these road blocks?**

We should start by understanding and defining the real impediments to our future. We can best get there by engaging in a process that helps the public sort out what is real from the distractions foisted upon us for political purposes. For example:

- Were Oklahoma's problems due so much to collective bargaining and labor unions that Right to Work was a necessity?
- Were our problems in Oklahoma due so much to gay people that it was critical to vote on a new round of discriminatory legislation? (Given our high divorce rate in Oklahoma, we could rename the bill The Defense of The Second Marriage Act.)
- Are our problems so much due to runaway government spending that we need the draconian curbs proposed by the TABOR initiative?
- Perhaps the lawyers are the problem, so much so that we need to limit our ability to seek redress in the courts.

- Or is it too many immigrants, so much so that we need to send some of them home? (Thank goodness for us that our Indian tribes had a “liberal” immigration policy.)

***The Oklahoma Academy for State Goals, begun during Governor Bellmon’s administration, offers a privately funded process for helping to filter real problems from political distractions. It is independent and bipartisan, and I hope private contributors will endow this organization and expand it.***

Other helpful processes are periodic reviews such as the EDGE study that Governor Henry initiated and the 100-member Reform Commission that Governor Nigh initiated. During my administration, we had similar such efforts, among them rural development and children’s initiatives. These are all good mechanisms.

It is important to have credible filters, responding independently and quickly, to help us identify and define the real impediments to improving our state.

**Once defined, who leads the way to solutions?**

Elected leaders and government are important. At a time when we have Bill and Melinda Gates and Bono named persons of the year by Time magazine...Brad and Angelina crisscrossing Africa and numerous others providing support and good work for so many good causes, we should appreciate the work of the private sector and citizens. But we should never lose sight of the fact that public service matters, government matters. Whom we elect and whom we ask to lead us are of critical importance in taking our state forward.

We have a choice to elect those who believe in shared opportunities and shared responsibilities. People who work to bridge our differences to improve our communities.

Or we can elect those whose primary objective is to concentrate power and influence by creating fear and distrust and by dividing us based on our differences ... making it easy to get elected but

nearly impossible to bring the opposing sides together after the election to solve our common problems.

**So what are some specifics?**

With an independent process helping to define problems and set priorities, with well intentioned leaders willing to work towards the long view and the state’s interest, what should we do? What are “great leaps forward” that would propel Oklahoma far above its current spot at the bottom of comparative statistics among the states?

We already know of several “great leaps” that have worked:

Building on land near the OU Health Sciences Center incubated biotechnology research that in turn created hundreds of high-paying jobs. The Presbyterian Health Foundation’s Research Park works!

Republican Mayor Ron Norick proposed sales tax increases in Oklahoma City to invest massively (or what my conservative friends would call tax and spend) in downtown infrastructure projects, sparking an enduring downtown redevelopment that attracts throngs of visitors, residents and new economic activity. MAPS works!

**We know we can do it. What else should we do?**

Invest the windfall in education. Let’s not divide the state’s current good fortune into a series of helpful election year handouts to be forever lost in the budget. Instead of three- and five-year plans, let’s have a spectacular one-year plan for education improvement that immediately raises teachers’ salaries to the national average and properly funds public schools. Nothing should have a higher priority than education funding. What we cannot productively spend in a year should be put into an endowment to serve the educational needs of Oklahoma’s children forever.

We should follow Republican Governor Mitt Romney’s lead and pass a comprehensive health

insurance program for our state. His program will result in insuring about 95% of the people of Massachusetts. Oklahoma, in contrast, is among the worst in the seriousness of health problems affecting our citizens, largely because so many of us are uninsured and have limited access to health care.

Wire our rural areas or make wireless communications possible to bring all Oklahomans within reach of data transfer, telecommunications, e-mail and the internet. When I visit friends or family members in a smaller town in Oklahoma, I invariably find that their ability to access the internet is much more limited than it is in metropolitan areas. Wiring Oklahoma is inexpensive, yet it is fundamental to our future growth as a state and the viability of these beautiful, safe, peaceful and scenic rural areas.

Provide permanent and dramatic support for education and research by creating research parks not just in Oklahoma City, but in Tulsa and elsewhere in Oklahoma. And not just in biotechnology, but also in the next great field — sustainable and renewable energy production. Oklahoma should be the leader in wind energy, which could be centered in Elk City or Weatherford. Yet we are trailing most states in policies to encourage this technology. We can not allow the next big generator of jobs...alternative energy technology, to pass us by.

But how do we pay for this? The one billion dollar EDGE endowment is a great start. How do we fully fund this endowment?

We could sell our unproductive assets and use the equity proceeds to raise a billion dollar endowment. Have you ever seen the State of Oklahoma's balance sheet? The answer has to be "no," because we don't have one. The total value of what our State owns is anybody's guess. But here are a few questions.

Why does the state own a utility? Even Nicaragua has privatized its utilities, yet we still own the GRDA valued at \$400-\$500 million...maybe more.

Why does the state own an industrial park? This facility located in Pryor, Oklahoma has a value of at least \$100 million.

Why do we own an insurance company? Comp Source was intended to be an insurer of last resort. We can now meet that need through licensing, regulation and a competitive market. I'm unsure what our equity is in this entity, but it is at least \$50 million.

Why do we own so many state office buildings? State government would spend less money on rent than they do currently on maintaining these buildings, the buyers could take advantage of depreciation (which the State cannot do), and the result is several hundred million more dollars to invest. Boom! There is your billion dollars.

Of course, doing it is not that simple, but this plan or something similar is doable.

Do you realize what kind of national news Oklahoma makes when we create a billion dollar endowment for education and research?

These are a few specific ideas. I had wanted to tell you how feasible it would be to have a high-speed train system connecting the great economic centers of Kansas City, Denver, St. Louis, Dallas and Houston with passenger and freight service, all "hubbing" out of Oklahoma. Perhaps next time ... I am out of time and space.

So what will it be? Geat leaps into the future or superfluous bickering over meaningless social issues designed to win elections?

**You choose.**

## ***Funding the Partnership***

*Vic Vreeland, Mayor  
City of Jenks*

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The State of Oklahoma has an important role in economic growth and job creation within the State. Why doesn't the leadership of the State recognize that economic development is a local challenge burdened by the actions of State Government? Currently the State of Oklahoma provides two primary incentive programs for new businesses relocating to Oklahoma. These programs include "Investment/New Jobs Tax Credit Package" and the "Quality Jobs Package". These incentive programs are critical to the attraction of new business. However, the business environment of the 21<sup>st</sup> century is placing the majority of the demands from potential prospects on local governments.

The State of Oklahoma continues to burden the ability of local government to respond to the needs of economic development prospects by not recognizing the implication of their mandates and laws. The State continues to strengthen its coffers without providing diversification of revenue sources at the local level.

The full Senate on February 8, 2006, approved Senate Bill 1022 by Senator Mike Morgan that provided an exemption on NBA and NHL events in Oklahoma from sales tax. The measure was amended to include minor league baseball and hockey teams based in Oklahoma City and Tulsa. Senate Bill 1665 by Senator Jay Paul Gumm created a tax-free weekend during the month of August which would apply to certain items of clothing and footwear.

These are examples where State Government failed to recognize that sales tax is the only means provided to the local municipalities to fund general government. The recent annexation law changes have crippled the ability of the local communities to expand public services and provide areas for economic growth. To provide adequate service

levels the local governments must be capable of expansion to afford the service level demands. The leadership of Oklahoma needs to recognize that significant costs related to economic growth are incurred at local levels of government. The municipalities must be empowered to respond to these demands. The essential elements of economic growth include transportation, communication facilities, work force, environment and education. The local municipalities must be capable of providing the elements to attract new business into the state.

The State of Oklahoma's role must be to support the local government in their endeavor to create the proper atmosphere to induce economic growth. Education is one area that will require measuring by the State to ensure that Oklahoma has an employable work force for a new world wide economy. This is the prime result that must be achieved from the educational components in the State.

The Oklahoma State Legislature needs to fully understand the implications of their decisions. The introduction of potential new laws that remove funding at the local level or mandates a cost to municipalities is irresponsible unless they also provide diversification to the means in which local government is financed.



## *Now Where Do We Go?*

*Clay Pope, Member, Oklahoma House of Representatives, 1994-2004*  
*Loyal*

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### **Oklahoma, you've come a long way baby!! Now where do we go??**

While to most of us one hundred years seems like a long time, it's not in the life of a state. We often forget just how young Oklahoma is and how far we have come in just ten short decades.

As a candidate for office, I used to joke that my forefathers were kicked out of every decent country in the world and every decent state in the Union and ended up in Oklahoma. That isn't true, of course. As a seventh generation Oklahoman, my people came from everywhere for just about every reason imaginable. Still, we sometimes forget about how the varied experiences of our ancestors affected the way different parts of Oklahoma evolved.

As a son of Western Oklahoma, I'm proud that my part of the state went from once being known as the "Great American Desert" to being part of the "Breadbasket of the World" in less than 50 years. This change points to the free land that was available in Oklahoma Territory, what today makes up parts of Western and Central Oklahoma. Free land led to settlement by immigrants from other agricultural areas from all over the world.

These individuals were entrepreneurs wanting to build economic opportunity from the ground up. Unfortunately, their push for more agriculture output also caused marginal land to be put into crop production under methods better suited for areas that receive more rainfall. This helped lead to the Dust Bowl of the 1930s. This increase in production and the continued dependence on commodity agriculture also led to the drastic loss of population experienced in Western Oklahoma. Also, while most of the communities in Oklahoma Territory were settled by individuals who put a premium on education (information compiled for

the December 1995 Oklahoma Business Bulletin by Larkin Warner and based on numbers from the U.S. Bureau of the Census showed the counties with the highest percent of high school graduates for population 25 years or older primarily in the area of old Oklahoma Territory) this often resulted in the children of these communities getting a good education, going off to college and going to where the jobs were. More often than not they never came back.

On the other side of the state in what was once Indian Territory, another set of circumstances can help explain where we are today. For starters, we all know of the huge economic upheaval caused by the trail of tears and the removal of Native Americans to Eastern Oklahoma. While there were definite periods of economic prosperity (i.e. the golden age of the Cherokee Nation), over all the tribes of Indian Territory faced constant challenges in trying to build a strong economic system. In addition, the inability of non-tribal members to own land and the ownership of land in common by most of the Indian nations led to problems associated with the "tragedy of the commons" where people are hesitant to make large investments into assets they don't directly own.

Also, many non-tribal immigrants were not entrepreneurial, due to their inability to directly own resources in the areas where they settled. While many in Indian Territory (especially many tribal members) placed a premium on education, many settlers did not have access to educational opportunities due to the lack of educational institutions open to non-tribal members.

From a historical perspective this can at least partially explain the consistent challenges we face from high levels of poverty and low levels of educational attainment in some of our Eastern Oklahoma counties.

While the above statements about Oklahoma's two halves are generalities, it does at least show we have experienced a history unique to the other states in the Union. We are one of the youngest states (number 46 and the last frontier in the lower 48 states), we are more ecologically and geographically diverse than most other states (only California has more ecosystems than Oklahoma) and we have ridden out some of the largest boom and bust waves of the 20<sup>th</sup> century.

With all these challenges you would expect Oklahoma to have its share of problems and to still be struggling to find its footing. However, even with all these obstacles we have achieved much.

Let's look at just a few of the things we can be proud of ...

- While we all know about Will Rogers, Wiley Post and Jim Thorpe, many of us don't realize Oklahoma has had more astronauts per capita than any other state.
- Our impact on the arts is evident, whether it be Native American Ballerinas, country music singers or movie stars.
- Our Universities have produced graduates of distinction who have helped shape the course of the nation and the world.
- Our Career Tech system is widely recognized as the model for the rest of the nation.
- We Oklahomans enjoy an ancestral base of nationalities as diverse as any place on the planet.
- As mentioned above, a large portion of our state has gone from being the "Great American Desert" to being the "Breadbasket of the World" in less than a century.
- The prowess of our college sports programs speak for themselves.

- Our historical place in the energy industry has not only brought wealth to our state, but it has also positioned many of our sons and daughters throughout the globe, wherever oil and gas is produced.
- When considering our size and age, the fact we have produced "the Uncrowned King of the U.S. Senate" in former Senator Robert Kerr and a Speaker of the U.S. House of Representatives in former Rep. Carl Albert our past political successes are evident.
- How many other states have ever had the experience of having a member of their congressional delegation giving the presidential nomination speech at BOTH major party conventions in the same year (J.C. Watts and Dave McCurdy in 1992)?

And the list goes on and on ...

So where do we go from here? As a young state that is still trying to find its footing, we must be careful that we consider everything in context.

Much has been made of comparing our economic growth to that of Texas. This seems wrongheaded considering the different time periods of settlement between the two states (in 1716 the mission that was to become the Alamo was moved to the banks of the San Antonio River from its earlier location on the Rio Grande, a sight it had been at for decades. Western Civilization has been in Texas a whole lot longer than 100 years), the size difference, the level of federal spending in the two states, and the fact Texas shares an international border with one of America's largest trading partners, and has one of the largest ocean ports in the world at Houston, just to name a handful of differences.

We also have to be careful that we don't focus on "magic bullets" that if enacted will fix everything. While issues such as right-to-work, tax reform, additional education funding, more University research dollars, infrastructure improvements,

workers compensation reform, and tort reform are all important, we have to remember when taken as single issues these won't make the earth-shaking changes often claimed by their proponents. It is a combination of all of these along with other changes that will bring us future prosperity and the growth many of us would like to obtain.

We also must look to the question of sustainability and how we address each part of the state. We know Tulsa and Oklahoma City are moving forward. Recent investments in infrastructure and amenities have brought a renaissance to Downtown OKC. Similar investments are being made in Tulsa. These combined with state incentives and investments in key areas such as medical and other technological research (along with good oil and gas prices) are paying huge dividends, especially in Oklahoma City.

This investment in the core areas of our two largest metropolitan communities could lead the way for more core community investment with a focus on a reduction in urban sprawl. Is this a path we would like to follow? If so, are we prepared to make the investments and take the actions necessary to make it happen? While this would save dollars on services such as fire, trash and water, what other impacts, both good and bad, would it have?

What do we do with towns such as Arnett, Loyal, Billings or Hartshorne? How do we confront the loss in population in Western Oklahoma and the continuing poverty in Eastern Oklahoma? How do we direct rural development funds? For some of us, any town that has a McDonalds (maybe even a Sonic) has lost its designation as "rural." For others, anything less in population than Woodward is past saving and should be allowed to die.

Do we redouble our efforts to provide these towns with the infrastructure they need to maintain a high quality of life? Do we let the mercies of the marketplace decide their fate (I would add that from free land to rural electricity to investment in water systems the marketplace has been manipulated from the start and we need to realize

this when we have this discussion, but that's another topic)? What incentives if any are we willing to direct to this effort? And, if we let these towns die, is going from prairie to prairie in less than 200 years a good policy alternative? Energy and Agriculture are the mainstays for much of our rural economy. What is their future and how do we capitalize on it?

What do we do with our tax system and government spending in Oklahoma? Many argue we should take this opportunity to cut taxes and keep down spending to provide growth. While there is some truth to this position, we should remember that taking this as a matter of faith makes little sense. If low government expenditures and little or no taxes insured economic growth, Haiti and Somalia would be the leading economies in the world and the Dakotas and Wyoming would be the states driving our domestic prosperity. That said, high taxes can stifle growth and spending our way to prosperity is not a sustainable option.

What then do we do? Do we eliminate the income tax, tying our state to unstable forms of revenue such as the gross production tax and the sales tax? Are we comfortable with inviting the specter of state government revenue failure into our lives when we have downturns in the U.S. economy (sales tax directly moves with the economy—when you have a recession, sales taxes drop immediately, while with income tax you have "float" since it is based primarily on last year's income and anyone who remembers the late 1980's and early 1990's knows what can happen with oil and gas revenues)?

We have only to look at the budget crisis experienced already this century by other states such as Tennessee, Florida and Texas to see what can happen. Do we continue to reduce our tax rates incrementally and with a focus toward certain areas of growth? Do we make our income tax code more realistic—a process begun this year by the legislature when they increased our standard deductions to the federal level—thus helping not

just top rate payers but all citizens with an eye toward increase consumer spending or do we focus on the top rates—a step also taken this year by the legislature—with the hope this reduction will result in increase capital investment in the state and the attraction of wealthier citizens to our communities? Do we do both? What is a good level of taxation so that we can address vital needs?

With government spending, where do we focus and at what levels do we want to spend the state's money? This year alone we have seen increases in certain levels of expenditures, but at the same time, we are now reading about potential shortfalls in the dollars available to public schools to cover new costs. We are also hearing of shortfalls in areas such as public safety. In addition we are hearing loud concerns about the level of state spending growth. How do we address this? Are investments in areas such as transportation, environmental protection and conservation, public safety, education and economic development necessary? What happens if we cut these expenditures or simply leave them at the level they are at today? These are choices we have to make.

What of our culture?

A state of immigrants, Oklahoma is blessed with a multi-ethnic ancestral base. In a globalized economy, is this something we want to take advantage of? Often Americans have trouble connecting to parts of the world where the idea of nationality or tribe drives much of the thinking (I can't tell the difference between a Persian and an Arab, let alone a Scotsman from an Englishman but they sure can). In Oklahoma we have 39 federally recognized sovereign nations with leaders who work on issues revolving around common culture and tribal politics.

These individuals are also Americans who understand the immigrant culture of the United States. Is this an untapped resource in the area of trade and diplomacy? If so, how do we capitalize on it? Prior to European contact, the Native

Americans in what is now Oklahoma were traders. Many have described Oklahoma as part of the silk road of pre-European America. Is there something in this we can build on?

Finally, what do we do about the attitudes and outlooks of ourselves and our fellow Oklahomans? Too often we take the position that we are just no damn good. I am struck by how many times when I have a conversation with a fellow Oklahoman and someone from another state, the non-Oklahoman can't cut down Oklahoma, because the Oklahoman will beat him to the punch and criticize our state first.

This has to stop.

No matter how many economic plans we have, no matter how many incentives we dream up, no matter what our educational system is like, as long as we kick ourselves in the teeth, our growth will always be sub-par. We know Oklahoma better than anyone else. If we say our state is no good, people will believe us. You can't recruit business by saying "Hey, Oklahoma stinks so you should locate here."

As mentioned before, we have a lot to be proud of. While we shouldn't play Pollyanna, it would be helpful if we kept in mind how far we have come and how special our part of the world is. After all, our ancestors, however they got here and for whatever reason they came, did make a garden out of the wilderness.

My mother always said, "If you don't toot your own horn, nobody will do it for you." Perhaps that's the biggest and most far reaching change we can make. If we focus on what we have going for us while sitting down and having serious discussion about what we need to change to get where we want to go, we can continue to overcome our challenges and make Oklahoma the state we all know it can be.

## ***Oklahoma Education Policy and Politics***

*State Senator Susan Paddack, Chair, Education Committee, Oklahoma State Senate  
Ada*

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*The cornerstone of future prosperity in Oklahoma will be built through enacting sound educational policy within the next decade. As we now compete in the global economy, it is imperative that our students be better educated than ever before for entry into that world.*



Oklahoma celebrates much success in the educational community. We are a national model for Pre-Kindergarten programs, according to the National Institute for Early Education Research. We are number one in the percentage of four-year-olds attending public preschool programs, and are one of only two states offering voluntary access statewide. This program helps to close achievement gaps among students. Another program, Smart Start Oklahoma, helps to ensure children are ready for success when entering school by coordinating available health and educational resources to capitalize on research showing ninety percent of brain development occurs before children enter kindergarten.

Studies by Achieve, Inc. and American Federation of Teachers confirm our state's *Priority Academic Student Skills (PASS)* core curriculum as being among the best academic standards in the country.

Our ACT scores show an upward trend and participation rates have also increased since 1990. In 2005, Oklahoma ranked third in the 16-state southern region with an average ACT score of 20.4, just under the national average of 20.9.

Oklahoma consistently ranks in the top ten states in "Improving Teacher Quality" in *Education Week's* annual report. We had the ninth highest

number of National Board Certified teachers in the U.S. in 2005 and are ranked fifth in the nation in percent of teachers with national certification, according to the National Board of Professional Teaching Standards.

Our success continues in Higher Education through the Oklahoma Higher Learning Access Program (OHLAP), also known as "Oklahoma's Promise." This

scholarship program allows high school students from families whose annual income is \$50,000 or less to earn free college tuition. It may be used for up to five years at any public college or university in the state. This program encourages greater numbers of our students to further their education. Research shows that students earn more than an additional million dollars in their lifetime if they have a college degree. Since inception in 1992, more than 63,000 students have enrolled in the program.

While these successes make us proud, we cannot afford to become complacent. As we participate in the global economy, we should use these successes as a springboard and motivation for further achievements.

Legislation was passed during the 2005 (SB 982 by Morgan/Cargill) and 2006 (SB 1792 by Paddack/Dank) sessions that move Oklahoma to high stakes testing. These two pieces of legislation known as ACE, Achieving Classroom Excellence, require students entering 9<sup>th</sup> grade in 2008-2009 to demonstrate mastery of state academic content standards by passing four out of seven end of instruction (EOI) tests in order to receive a high school diploma.

SB 982 required school districts to offer full day kindergarten by the 2011-12 school year. The bill also improved middle school math by providing training of 500 teachers and awarding bonuses to teachers who successfully passed the intermediate math certification exam. Ten pilot middle school math labs were funded for schools with recorded low math performance.

For students entering 9th grade in the 2006-2007 school year, the bill mandated a college preparatory curriculum, while also allowing parents an opt out choice for their children. Finally, it provided money for tuition waivers for high school seniors who meet eligibility requirements for concurrent enrollment in college courses.

Provisions of SB 1792 include the creation of an ACE Steering Committee to advise the State Board of Education on numerous issues to be addressed in moving toward high stakes testing such as curriculum alignment, assessment development, alternate tests, and intervention and remediation strategies. It delineates the college preparatory/work ready curriculum as the default curriculum, which meets all the requirements for high school graduation.

It names the seven EOIs and provides that students must pass Algebra I and English II and two of the following: English III, US History, Biology I, Geometry, and Algebra II. Finally, it directs that the EOIs and the third through eighth grade tests in reading and mathematics be reviewed, realigned, and recalibrated.

While the ACE legislation was a major step toward ensuring our students graduate from high school with

the skills they need to be successful either in the workplace or in other educational endeavors, one significant piece was left undone this session. The ACE Task Force recommended that all students pass the 8th grade math test in order to apply for a driver's license. Current law requires students to pass an 8<sup>th</sup> grade reading test. By adding the math test, students would have an incentive to take the test seriously and be better prepared for high school math.

This requirement did not receive sufficient legislative support and was removed in the final bill. What does it say about our state when people do not wish to require students to pass an 8<sup>th</sup> grade level math test to receive a driver's license? It is obvious that we have much work left to do in creating a culture that embraces educational change and higher expectations for our students.

The need for school improvement is shown by our college remediation rates. Of fall 2004 first-time freshmen, 38.7 percent enrolled in remedial courses. Remediation by subject for fall 2004 first-time freshmen was: 32.9 percent mathematics, 17.7 percent English, 5.5 percent reading, 2.0 percent science.

From fall 1996 to fall 2004, the percentage of freshmen with an ACT score below 19 decreased in English, Science, and Reading, but the percentage of freshmen with an ACT score below 19 increased in mathematics.

We also need to study how our state performs in reading and math relative to other states as measured by the National Assessment of Educational Progress (NAEP), also known as the Nation's Report



## NOTES

Card. In 2005, the average 4<sup>th</sup> grade reading scale score is down 5 points since 1998, which is a significant decrease. From 2003 to 2005, Oklahoma's 8<sup>th</sup> graders scoring at or above the NAEP Basic level in math trailed the nation by five percentage points and trailed states in our region by one percentage point.

As legislators, we need to be leaders for change. As citizens, we need to inform our peers about changes taking place in our world and how they affect our children's education and our state's future. We must all seek to be consensus builders and foster more collaboration. It is through this awareness and collaboration that we will be able to achieve our goals.

Collaboration is beginning. Thanks to a meeting facilitated by the Southern Regional Education Board, leaders from common education, higher education, career technology, business, and legislators met in February 2006 to discuss ways to provide the seamless educational opportunities that will produce the needed educated workforce. There will be more opportunities for dialogue and the best policy changes will come as a result of this effort.

Clearly, to move our state ahead economically, we must have a well-educated citizenry with the skills necessary to meet the constantly changing demands of the work environment. To achieve that goal, we must continue to work in the legislature to pass policy that stays on course to make education in Oklahoma the best it can be. We also need input and wise counsel from an informed and engaged public to ensure that our state succeeds.

# ***Governmental Capacity: Measuring Up in the 21st Century***

*Kenneth Kickham, PhD, Assistant Professor  
University of Central Oklahoma, Edmond*

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## **Oklahoma Politics 101**

In recent decades, political scientists have charted the progress of nations and states toward economic modernization and participatory politics. The values expressed along these lines include literacy, high per capita income, social mobility, an informed electorate, and of course a high degree of civic engagement.<sup>1</sup> Contemporary authors<sup>2</sup> argue that progress in an era of globalization requires a political environment where innovation flourishes as an everyday process.

Common observation tells us that some states are more prepared to meet these challenges, while others lag behind. In the 21<sup>st</sup> Century, Oklahoma needs a culture of politics that values participation, professionalism, and institutional capacity.

In each of the last two Presidential elections, Oklahoma's voter turnout was below average, as was the case in most Southern states.<sup>3</sup> Southern and rural states' political systems are also characterized by institutionally weak governors, "amateur" legislatures, and outmoded approaches to human resource management.

While it is difficult to find ways to engage an uninvolved electorate, we can, with a bit of honest effort, boost the institutional capacity and effectiveness of state government. Preparing for the 21<sup>st</sup> Century means making sure Oklahoma is up to speed in terms of how state business gets done.

## **Oklahoma Legislature**

Institutional capacity begins with the legislature—the direct connection between the people and their government. In 1990, Oklahoma became the first state to approve legislative term limits.<sup>4</sup> From a gut level, term limits make sense. The idea of the "citizen legislator" is extremely popular among voters nationwide, with polls indicating over 70 percent approval.<sup>5</sup>

On the other hand, term limits also reduce the professionalism of the legislature. Since the 1960s, Oklahoma has made real progress in legislative reform, particularly by increasing salaries and staffs. To some degree, term limits work in the other direction by reducing the experience and expertise of the legislators. This seems risky in an environment of "devolution," where complex policy problems are increasingly handed over to state government.

States with strong progressive traditions have long valued full-time, professional legislatures with solid support staff.

Professional legislatures are better equipped to handle complex budget and oversight responsibilities. In the 21<sup>st</sup> Century, Oklahoma's executive branch will face challenges no less daunting. Any discussion of governmental capacity ultimately turns to our ability to deliver what the state needs.

An institutionally strong Governor and forward-looking management strategy are essential. In Oklahoma, we have some work to do in these areas.

## **The Office of Governor**

According to the most widely-used measure of the institutional powers of Governors, only two states rank lower than Oklahoma.<sup>6</sup>

What can we do to empower the chief executive?

Compared with other states, Oklahoma restricts the Governor's appointive powers. Our Constitution weakens the executive branch by splintering it into several separate power bases. Offices ranging from Insurance Commissioner to Commissioner of Labor to State Auditor and Inspector are elected in statewide races.

None of these officials reports to the Governor. Add to this the fact that Boards and Commissions control most of the basic functions of state government, and it becomes clear how difficult it is to effectively coordinate and manage.

Take the example of education.

The Governor appoints a cabinet secretary, but the position has little power when compared to that of the elected Superintendent of Public Instruction.

Then there is the Corporation Commission. Other than the legislature, this is the most important political entity in the state. The Commission regulates and supervises the activities of all businesses whose services are essential to the public welfare. Public utilities, oil and gas production, motor fuel quality and containment, pipeline safety, and groundwater contamination fall under its jurisdiction. Commission orders carry the weight of law, and its decisions are appealed directly to the Supreme Court.

The Governor has no direct control over this very powerful state agency.<sup>7</sup> Given these restraints, it is difficult to imagine how even the most innovative chief executive could get much done.

Some would say the time has come to reorganize the executive branch to strengthen the Governor's hand. Reorganization would enhance our institutional capacity to develop and pursue a coordinated agenda, while focusing accountability on an identifiable administration.

But is reorganization enough?

Twenty-first century challenges require the kind of strong leadership, and ultimately the positive results, that give people confidence in their government. Reorganization makes it possible to solve the leadership problem. Results, on the other hand, depend on the people who do the work in state agencies.

To fully prepare for the 21<sup>st</sup> Century, we must also unleash the innovative potential of our state employees.

## **Improving Performance**

For over a decade, people who study government bureaucracies have been grappling with a management mantra called "Reinventing Government."<sup>8</sup> The main point of reinventing government is to break free from traditional ways of doing the government's business.

Civil service protections, for example, drain an agency of some of its productive potential. So do bureaucratic rules and regulations. In short, the idea is to emulate the private sector, where managers are empowered to manage, and held accountable for results. The approach has its detractors, of course; but most state and local governments have tried to move in this direction.

Under the Clinton administration, the federal government made a high-profile project of "reinventing" itself, and President Bush has gone even further down the path. So, how about Oklahoma?

The best way to assess how well Oklahoma's agencies are managed is with the well-known "administrative report card," which is essentially an index of bureaucratic performance.<sup>9</sup> The Government Performance Project (GPP) at Syracuse University is an extensive review of state performance in several areas.

Oklahoma's lowest grades are in Human Resource Management and Managing for Results, categories that reflect the goals of reinventing government. GPP researchers found a bureaucratic culture that still embodies the old civil service mindset. Strategic planning is in its infancy, performance based management is regarded with suspicion, and tracking productivity is not a priority.

Can anything be done to improve Oklahoma's grades?

One avenue is civil service reform. "Merit" protections for "classified" employees were necessary in decades past to combat patronage. In this era, however, effectiveness and efficiency are the main priorities. Agencies are dodging merit protection by using a parallel "unclassified" system for many new hires. The more flexible

unclassified service enhances managerial discretion and employee motivation.

Unfortunately, the classified civil service continues to dominate because unclassified employees cannot exceed five percent of an agency's workforce. If Oklahoma is serious about improving its government, removing the cap on unclassified employees is a good place to start.

### **The Metric**

The GPP report card is a useful tool in comparing Oklahoma with other states. Is it the perfect metric for evaluating our ability to meet the challenges of the 21<sup>st</sup> Century? Probably not. Ideally, we would incorporate legislative professionalism and executive capacity into an overall index of governmental readiness. Since no one knows what the future holds, the key is adaptability.

Empowered executives, acting in concert with capable legislators, give the best hope for government that can face any challenge. The best approach is to combine the GPP report card score (converted from a letter grade to a five point scale) with the measure of the institutional powers of the Governor (already a five point scale) in equal parts. This metric indicates, perhaps crudely, how hopeful we can be about our institutional capacity to meet the challenges of the 21<sup>st</sup> Century.

### **NOTES**

- <sup>1</sup> See, for example, James S. Coleman, "Conclusion: The Political Systems of the Developing Areas", *The Politics of Developing Areas*, eds. Gabriel A. Almond and James S. Coleman (Princeton, NJ: Princeton University Press, 1960), p. 532.
- <sup>2</sup> David Osborne, *Laboratories of Democracy: a New Breed of Governor Creates Models for National Growth*, (Boston: Harvard Business School Press, 1988), p. 4. Colin Leys, *The Rise and Fall of Development Theory* (London: James Curry, 1996), p. 28.
- <sup>3</sup> U.S. Congress, Clerk of the House, <http://clerk.house.gov/members/electionInfo/elections.html>. Accessed July 8, 2006.
- <sup>4</sup> David R. Morgan, Robert E. England and George G. Humphries, *Oklahoma Politics and Policies: Governing the Sooner State*, (Lincoln: University of Nebraska Press, 1991), p. 99.
- <sup>5</sup> Kevin B. Smith, Alan Greenblatt and John Buntin, *Governing States and Localities* (Washington, D.C: CQ Press, 2005), p. 209.
- <sup>6</sup> See Thad Beyle's 2005 analysis, <http://www.unc.edu/~beyle/gubnewpwr.html>
- <sup>7</sup> Morgan et al., p. 111.
- <sup>8</sup> David Osborne and Ted Gaebler, *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector* (Reading, MA: Addison-Wesley, 1992).
- <sup>9</sup> Smith et al., pp. 311-14. Also see <http://www.maxwell.syr.edu/gpp/grade2002full.asp> (accessed July 17, 2006).

## *The Oklahoma House*

*Representative David B. Braddock, Oklahoma House of Representatives  
Altus*

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### **What are the challenges Oklahoma faces meeting the political maturity and leadership needed for an economy that will capitalize on the growth sectors of the 21<sup>st</sup> century?**

I think one of the first and primary challenges for our great state is the maturation of our political system. Over the last decade, I have had the opportunity to witness a wide spectrum of the political scene at the state capitol. We honestly had too much “good ole boy network” running the show from behind the scenes. Some times this network was able to work with the Democrat majority to make positive changes and move our state forward. At other times, this network simply was more interested in making money and giving out favors to good friends. Unfortunately, leadership many times caved in to the pressure of the “network” and moved laterally instead of forward.

The Republican minority pressed hard to establish a viable presence at the Capitol over the last few years. At times the Democrat majority was too focused on running the business of the House and not looking at the big picture. It was always easier for the minority party to throw rocks when they didn’t have to run the show. However, the minority party definitely had some good points toward challenging the status quo. The State House did need to review all of our spending in every agency and ask why. It was alright to demand proof of funds needed. We should have stepped back from the trees and look at the forest from time to time. Was the State House heading in the right direction?

Fast forward to the last two years. Now the minority is the majority in the House and where are we in the big picture? As with any change in power, we have had the good with the bad. The overall idea we should review government with a new perspective is good. The new majority forced us to look at spending, taxes and tax structure.

Unfortunately, we also had a new “network” to deal with. This new “network” had its issues and concerns the same as the old. Sometimes the more things change, the more they stay the same.

So where does that leave us in moving forward as a state? We still are too consumed with fighting for control and party politics. Too much of the time what is for the good of the people and the people’s future still gets shoved aside for what is good for the various caucuses (Republican and Democrat). We seem to be in a never ending race to see who is the most conservative. Lest we need to be reminded that all Oklahoman’s, Republican and Democrat, are more conservative than just about any other state regardless of party affiliation. We will continue to have problems focusing on the big picture until we can get past the immediate concern of trying to one-up each other. We have to get past the “gotcha” attitude. Too much time is spent on campaign issues like “values” and not enough time on trying to position our economy for future growth. While we all acknowledge values are important, we cannot decree values from the Legislature. The Legislature can help provide better opportunities for our children to succeed; provide for a more well-rounded education for our children; and promote job opportunities for Oklahomans.

The next big shift toward an economy that will capitalize on the growth sectors of the 21<sup>st</sup> century for our state will not happen until we experience the maturation of our political system. We have always been until recently a one party state. As we come to grips with having a true two party system, we will lay the foundation for our economic future. This type system will be very healthy in the long run. The legislature must become more focused on the creation of an environment which will promote economic success rather than promote party politics. Hopefully, this will happen in the near term. Our future is bright, if we work together to make it happen.

## *Can Oklahoma Values and Attitudes Survive in a 21<sup>st</sup> Century World?*

*Senator Clark Jolley, Oklahoma State Senate  
Oklahoma City*

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Oklahoma is my home by choice. Unfortunately, many of my fellow Oklahomans can't wait for the opportunities that lie outside of our borders. This is not a problem unique to Oklahoma; it is shared by many people around the world. They long for somewhere other than "home" in order to be able to make a difference in the world in which they live. A certain Rabbi left home to begin his public ministry in part because "a prophet is not welcome in his home town." So with the natural exodus which occurs in the natural progress of a state, what values and attitudes in Oklahoma have an impact on the growth sectors of the 21<sup>st</sup> century?

When reflecting on "growth sectors" in the second Oklahoma century, I personally see less reliance on industry of manual labor and a growth of dependence in intellectually-based industry and services. While we should never neglect manufacturing, we should be more aggressive in embracing the knowledge based community.

Oklahoma's values are both its greatest strengths but can also be its greatest weakness. Our outright friendliness and acceptance of others without demanding accomplishment from them makes us among the most welcoming and accommodating places to live. However, that same reluctance to expect achievement from our peers fosters an attitude of accepting less than what is vital for success in a 21<sup>st</sup> century world. A second area in which Oklahoma's values can be considered both strengths and weaknesses are our inward perspectives. When we compete, we measure our accomplishments against Texas. More so than any other country, state or region we want to beat Texas. Obviously, beating Texas is desirable; let me suggest that we need to shift our focus from beating Texas to beating Belgium, Germany, Ireland, or New Zealand.

In looking at the political landscape across party lines, there are standard lines which can be used in

any political campaign. From "we can do better and we must" or "it is time for Oklahoma to look ahead to its second century" to "we need our local values represented in Oklahoma City" and "he/she is one of us" - a common thread can be seen: there is a knowledge that Oklahoma is not attaining all that is possible. The common themes regarding "doing better" or "beating Texas" echo this fact. But the reluctance to want change is equally compelling: "our values are what will fix the challenges" and "those other people are the problem" are very successful slogans and themes of political races.

Fortunately or unfortunately, we do "campaign in poetry and govern in prose." When we look at the accomplishment of this state, we are very fearful people when it comes to the unknown. We are hard workers. We bear the burdens of our brothers and sisters with compassion and charity. But despite these numerous qualities which should embolden us towards greatness on the world stage, our previous leaders have been unwilling or unable to make a giant stride until we see someone else make that leap. As a result, we find ourselves many years behind everyone else as they are making their second or third leaps forward. While our political leaders debate and discuss whether it is wise for us to risk something bad happening if we take a large step in one direction or another, other states are realizing that in order to survive, giant strides must be made. One of our previous Governors advocated bold change. Admittedly with less tact than what may have been wise in hindsight, the changes advocated were met not with an open consideration of the ideas, but with outright "doom and gloom" regarding all impacts his proposals could have produced.

The reluctance to take these giant strides can be wrapped into every segment of the Oklahoma political landscape. Conservatives will argue that giant strides in certain directions will "grow

government” and should therefore be fought. On the same issue, liberals will argue that people are being forgotten and they need the protection of the public servants in the Legislature. We can’t place blame upon one segment of the public policy debate for all the ills of Oklahoma’s society. Likewise, our political leaders have to be allowed to suggest bold strides and have their ideas discussed and debated without rejection simply because it is a “giant step.”

With the foregoing premises considered, what are Oklahoma’s challenges in meeting the political maturity and leadership needed for success in the remaining 21<sup>st</sup> century. I would respectfully suggest the following challenges are evident:

(1) Mislabeling “good” or “acceptable” as “Great” or “Outstanding” In many aspects of Oklahoma public policy, politicians discuss how “great” of a job Oklahoma is doing. We boast of our accomplishments in education (our preschool success, for instance) and give our parents a false sense of security about their child’s chances for success because we are doing an outstanding job in preschool education. But the facts show that any advantage gained by the outstanding preschool is completely lost by the fourth grade. We have our own benchmarks of testing and we report to our citizens that schoolchildren in Oklahoma are learning and are testing at great levels. Then we see our scores on National tests and find us again in the bottom five or six in the country. We have to have political leaders who are willing to be a cheerleader for Oklahoma outside the state and lure people here, but are willing to confront reality and end the deception of Oklahomans by mislabeling mediocre as something of which to be proud.

(2) For Oklahoma to make headway on the lost ground, bold steps are vital. I don’t see Oklahoma recovering from the setbacks of the 1930’s and 1980’s by taking baby steps. We have to begin aggressively tackling the issues which are holding us back from growth and prosperity. Although we look at the low salaries in many areas of state government (teachers, correctional officers, etc...)

and complain, we fail to realize that virtually ALL Oklahomans are ranked 46<sup>th</sup> to 48<sup>th</sup> in pay scale. An excellent example of bold steps resulting in substantial growth can be viewed by the adoption and successful implementation of the MAPS and MAPS for Kids projects in Oklahoma City. Where this bold step involved the citizens publicly financing projects with a temporary tax increase, we have been reluctant to take bold steps in tax reductions.

(3) We have to care more for our future than our current comfort. Many areas of improvement are evident but making a change could make life more challenging. Our health is a blatant example of how we care more for our current comfort than our future. Oklahomans are unhealthy – and it is getting worse. Yet sales of non-nutritious foods haven’t declined to the point the market has altered. People still smoke and abuse alcohol and other drugs. Diabetes is on an upward path. Yet when faced with the overwhelming evidence that we are killing ourselves and our lives will end sooner than they should because of the unhealthy lifestyle we lead, most Oklahomans favor their current happiness over the prospect of an early death. But this doesn’t apply only to health. This applies to every aspect of Oklahoma’s character and value set.

When looking at a metric to judge movement in this area, I believe there are only subjective tests which can be assessed. When the political season is raging, are candidates discussing the need for “giant steps” – regardless of direction? When the political game is won, does the person then govern in prose without regard to the poetry on which basis they were elected? Any metric determining success in this area would be immeasurable based on factual findings. Only changes in dialog and debate will accomplish the problems outlined above.

Bold leadership sometimes means stepping forward and realizing nobody is on your left side or right side. Oklahomans currently don’t expect/desire their leaders be aggressive in advocating “giant steps.”