



Envisioning Nevada's Future

Goals & Strategies for Advancing Our Quality of Life

PREPARED FOR THE NEVADA VISION STAKEHOLDER GROUP BY MOODY'S ANALYTICS



SEPTEMBER 2010

Our Vision for Nevada

The people of Nevada enjoy a magnificent natural landscape and caring, inviting communities. We are diverse, independent, optimistic, entrepreneurial, and determined to succeed.

Every Nevadan receives encouragement and the opportunity to attain the highest level of educational excellence.

Nevadans of all ages—from children to seniors—are able to meet our needs for food, shelter, health, and culture and to enjoy our recreational resources. We are safe and connected—through communications and transportation—to our communities and the rest of the world.

Our public policy and business climate provide the economic foundation for our overall quality of life and:

- » Encourage innovation and broad-based economic resiliency and vitality;
- » Leverage our unique market strengths;
- » Attract investment and talent; and
- » Balance sustainable growth with responsible use and conservation of our natural assets.

Our governance is efficient, effective, inclusive and accountable. We monitor results and demonstrate measurable progress. We respect each other's points of view.

*"Home" means Nevada, "Home" means the hills,
"Home" means the sage and the pines.
Out by the Truckee's silvery rills. Out where the sun always shines.
There is a land that I love the best, Fairer than all I can see.
Right in the heart of the golden west
"Home" means Nevada to me.*

In 1933, the Legislature adopted "Home Means Nevada" as the official state song. Mrs. Bertha Raffetto of Reno wrote the song to honor the state.

Nevada Vision Stakeholder Group

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ECONOMY



ENERGY &
ENVIRONMENT



TRANSPORTATION



EDUCATION



HEALTH &
WELL-BEING



PUBLIC SAFETY



Facing the Future

Nevada's severe, two-year downturn has brought to light many of the long-term challenges facing the state. Not only is its growth subject to painful swings, but Nevada's primary drivers—resource extraction and consumer services—will provide less support than they have in past business cycles. Slower growth will make it harder to offer Nevadans the quality of life they expect.

Nevada's consumer and hospitality industries will feel downward pressure on their revenues as aging baby boomers scramble to make up for low lifetime savings. The state's gaming industry faces new competition across the U.S. and abroad. And in rural Nevada, the growth of primary resource industries will be modest, since commodity prices (other than for gold) are not expected to return to their recent peaks for several years.

The state's long-term growth is still expected to exceed the national average. Nevada's relative cost advantages, its hospitable culture, and its vast natural beauty will continue to attract migrants, mitigating shifts in demand for its core industries. Yet population gains, while still significant, will not match the trend of the last 30 years. Residential, retail and hotel construction will therefore no longer be a primary driver of regional growth.

Nevada's slowing growth potential is troubling because, even during the state's boom years, many of its residents' needs were not being met. For example, a wide range of educational yardsticks suggests Nevada could do a better job of teaching its children and training its workers. Tight state and local budgets notwithstanding, now is the time to make the structural changes and investments Nevada needs, lest its obstacles become insurmountable in the years ahead.

While Nevada's challenges were put into sharper focus by the recession, these issues have been known and discussed for many years. State and private agencies have developed numerous strategic plans, with the goal of providing public services more efficiently.

Stakeholders

In accordance with State of Nevada Senate Concurrent Resolution No. 37 of the 2009 Legislative Session, the Interim Finance Committee's Subcommittee to Conduct a Review of Nevada's Revenue Structure appointed the Nevada Vision Stakeholder Group. The group was created to assist in developing five-, 10-, and 20-year strategic plans for improving Nevada's quality of life. Working with Moody's Analytics, the group's primary task was to look broadly at the most important goals for Nevada's future and to identify the key investments and structural changes needed to achieve them.

Although the group included several policy experts, detailed policy analysis was not its aim. Discussions covered a wide range of topics, from the structure of the economy to education, healthcare, energy and the environment, public safety, and transportation. Stakeholders came from many backgrounds, representing Nevadans' diverse interests. Business leaders joined representatives of organized labor, philanthropic groups and public servants. The members brought a wide range of perspectives, from academic to practical, representing educators, researchers, builders and farmers. Nevada's regional diversity was evident, with members from both urban and rural areas. Given the group's range and broad consensus, its recommendations for the future are relevant and critical for the state.

The stakeholders had the advantage of meeting outside the legislative process. Thus, the group could set goals and make recommendations without considering political trade-offs or other constraints faced by policymakers. This freedom helped generate a wealth of creative ideas, both large and small. Some of these innovations may not receive the attention they deserve because of current legislative or constitutional barriers that can be removed only through structural reform. Yet Nevada's needs are serious enough to suggest that such reforms be on the table for discussion.

Quality of life

Quality of life can mean very different things to different people. This was particu-

larly true within the NVSG because of the diverse interests and viewpoints represented. The group's overall vision for Nevada revolves around a "triple bottom line" principle of economic development, environmental sustainability, and equitable opportunity for the citizens of Nevada. Economic development is the bedrock of progress and the reason living standards continue to rise. Environmental sustainability captures the commitment to responsibly and efficiently manage the state's natural resources. Equity embodies a pledge to ensure that all Nevadans have a share in the state's future.

The discussion of the stakeholders' vision is organized around six subjects, corresponding to broad policy areas that are essential to enhancing Nevadans' quality of life and fostering a fertile business environment throughout the state:

- » The economy
- » Energy and environment
- » Transportation
- » Education
- » Healthcare and well-being
- » Public safety

There is considerable overlap among these subject areas. For example, a successful economy requires plentiful energy, a strong transportation network, and a healthy environment. Similarly, a secure, well-educated and healthy population needs a growing economy.

Goals

Determining how Nevada can reach and sustain a desirable quality of life was the task of the NVSG. Members of the group identified a number of broad goals along with specific objectives and strategies to achieve them.

Among these broad goals is the need to **diversify Nevada's industrial structure** in a way that will **reduce volatility** in its economy, employment and public services. Nevada's infrastructure and resources can be leveraged to **attract clean energy producers and other** high value-added industries. Nevada can also take advantage of its position near growth markets on the West

Coast to support its **transportation and logistics industries**.

Complementing the goal of diversification is a **modern, well-maintained transportation system** that will increase the connectedness of communities throughout the state and strengthen Nevada's links with the Intermountain West. New industries must also be developed in conjunction with suitable **water conservation practices**.

Diversity will add well-paying jobs in high value-added industries that can help Nevada stay competitive in a changing global economy. Such jobs require a wider array of skills and increased workforce quality, in turn demanding more from education and training systems. To produce workers for growing, prosperous industries, **graduation rates from high school through graduate school** must rise. The commitment to education must start in **early childhood**, particularly for those from lower-income families, and continue with a focus on **hiring qualified teachers and keeping students engaged**.

A healthy community means providing not only educational opportunities for all but also a **clean and safe environment** and a wide range of cultural and recreational opportunities. A healthy population remains the foundation, producing important objectives for improving Nevadans' access to healthcare while **increasing efficiency to contain costs**.

Greater educational attainment and improved public safety would make Nevada more attractive to households and firms, leading to stronger and more stable economic growth. Income gains associated with growth in turn would improve the performance of the state's systems of education and public safety.

Key themes

While the NVSG's goals are as diverse and wide-ranging as the state itself, several common themes emerged from its discussions regarding strategy, and these are woven through its recommendations. Four such themes are:

- » Workforce development
- » Connectedness and collaboration
- » Utilization of federal resources
- » Adoption of information technology solutions

Other important themes highlighted by members of the NVSG include youth intervention and prevention programs, expanded home- and community-based programs, early-childhood development, efficient use of resources, and accountability.

Key strategies

The NVSG proposed an array of strategies that would help the state achieve its quality of life goals. The following key strategies were proposed by the group for each subject area:

Economy

- » Expand public-private research capabilities and technology transfer through increased venture capital funding and use of federal grant money.
- » Attract growth industries by reviewing the state's incentive system and improving upon its already-accommodative regulatory environment.

Energy & Environment

- » Secure better access to federal land for renewal energy development
- » Promote new water conservation and production technology for application in the state and for export.

Transportation

- » Build Interstate 11 between Las Vegas and Phoenix and seek another round of federal support to eventually extend the road to Reno.
- » Build high speed rail between Las Vegas and southern California

Education

- » Invest in early-childhood education
- » Allow public universities to retain a larger share of tuition and differentiate tuition for different schools and programs.

Health & Well-being

- » Expand enrollment in Medicaid and CHIP programs to expand access to healthcare in the near term.
- » Promote investment in healthcare information technology to lower costs and improve efficiency.

Public Safety

- » Establish a second National First Academy to serve the needs of the western U.S.
- » Expand rehabilitation options for those arrested for drug use.

Measuring progress

For the NVSG's efforts to be of lasting use, progress toward Nevada's goals must be monitored through quantitative performance measures. Tracking performance allows the state to make midcourse corrections or adopt alternative strategies where needed, promoting flexibility and a focus on long-term outcomes.

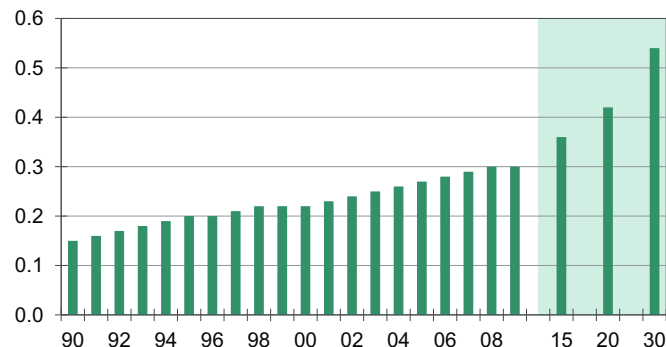
Each stated goal or objective in this report includes a performance metric, with five-, 10- and 20-year benchmarks. In most cases, the near-term goal is simply stabilization, with measurable progress expected in 10 years. After 20 years, the successful implementation of these strategies will advance Nevada's ranking significantly among its relevant peer group of states. The following pages include two key metrics with benchmarks for each subject area. Additional metrics and benchmarks can be found in the focus chapters.

Key Metrics

ECONOMY

Increase Industrial Diversity

Industrial diversity index, U.S.=1

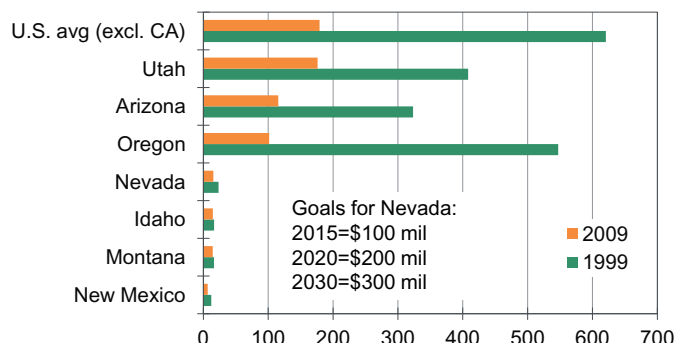


Source: Moody's Analytics

Nevada's economic volatility, the result of overreliance on a few highly cyclical industries, needs to be addressed through industrial diversification. The diversity index measures progress toward this goal. Diversity can be achieved by attracting industries that can be vertically integrated with existing industries, reviewing the state's incentive system, and streamlining the process of transferring federal lands to the state. The 20-year goal aims to narrow the gap in diversity between Nevada and the averaged diversity measures of Arizona and New Mexico by half.

Attract Venture Capital Funding

Venture capital funding, \$ mil



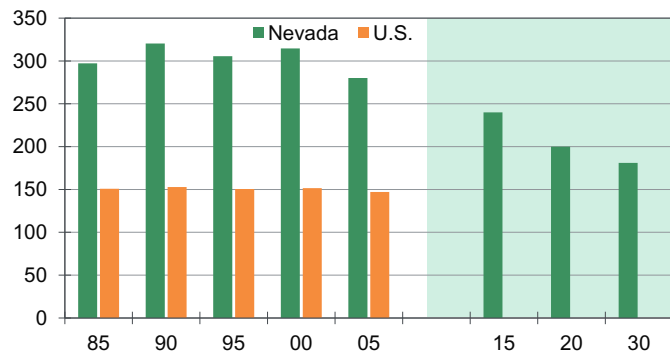
Source: PWC/Venture Economics/National Venture Capital Assoc. MoneyTree Survey

Venture capital funding is a good proxy for capital investment in a state or industry. Venture capital dollars usually flow into fledgling high-skill, innovative firms and industries. By increasing venture capital and expanding the use of federal grant money, Nevada can expand private-public research and technology transfer, helping the state to attract high-growth industries. By 2030, the goal for Nevada is for venture capital investment to reach \$300 million, which is about half the average for states (excluding California) in 2000.

ENERGY & ENVIRONMENT

Increase Water Use Efficiency

Public water withdrawals, gallons per capita per day

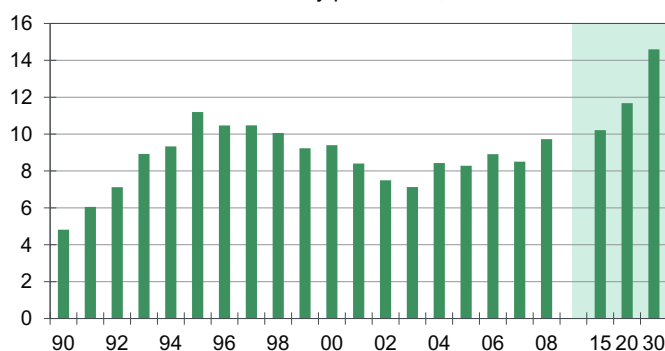


Sources: USGS, BEA, Moody's Analytics

A broad measure of municipal water conservation is the volume of gross water withdrawals per capita per day. In order to enhance Nevada's national leadership in resource conservation and technology, the NVSG recommends promoting water conservation and production technology for use within the state and as an export. By 2030, the goal is to reduce average water use by 35% from the 2005 level.

Increase Alternative Energy Production

Geothermal and solar electricity production, % share of U.S.



Source: Energy Information Administration

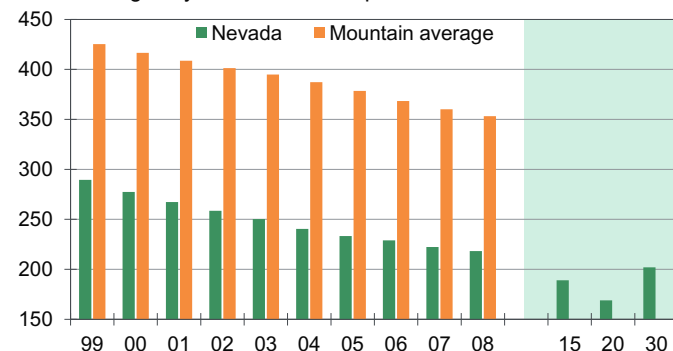
Nevada is gradually adding renewable energy generation capacity, but despite having considerable potential, the state's market share of renewable power is rising very slowly. The NVSG believes securing better access to federal lands for renewable energy development could raise the state's share of solar, geothermal, and wind energy production by 50% over the next 20 years.

Key Metrics

TRANSPORTATION

Increase Connectivity With Mountain West

Interstate highway centerline miles per 1 mil residents

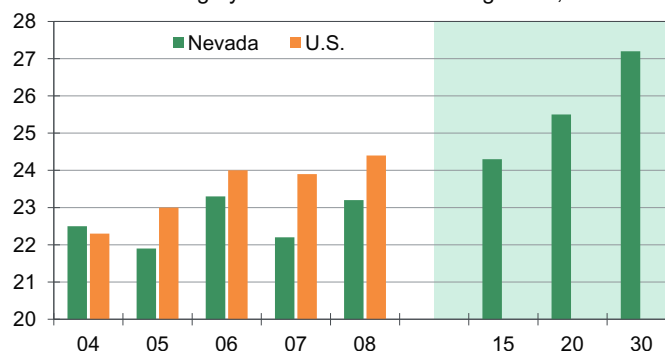


Source: Census Bureau, Bureau of Transportation Statistics

Nevada boasts a high-quality road network, but transport links to neighboring communities such as Phoenix and southern California need to be improved. The NVSG proposes the state improve highway links between Las Vegas and Phoenix and eventually extend the route north to Reno. The NVSG also recommends pursuing the development of a high-speed rail service between Las Vegas and southern California.

Increase Alternative Transportation Usage

Workers commuting by means other than driving alone, %



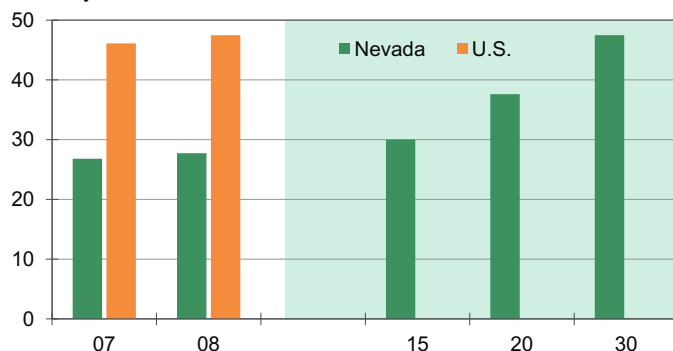
Source: Census Bureau: American Community Survey

The share of commuters who find alternatives to driving alone highlights the travel choices available to workers. The 20-year goal is to match or exceed the share of commuters using alternative means in Montana, the current leader in the Mountain West. In 2008, Montana's share was 27.2%.

EDUCATION

More Children in Early Education Programs

3- to 4-yr-olds enrolled in school, %

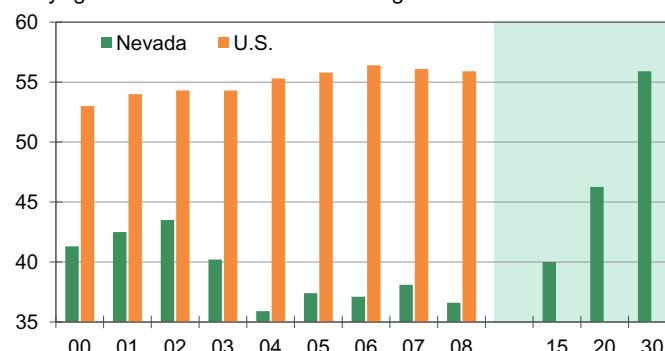


Sources: Census Bureau: American Community Survey, Moody's Analytics

The American Community Survey documents children aged three and four years who are enrolled in school programs. Nevada lags the national average, with just over one in four children attending preschool, compared with nearly one-half nationally. Numerous factors influence parents' decisions to enroll children in such programs, including their employment status and the cost of the programs. Nevada's goals are to show modest progress by 2015, to reduce the gap with the nation by half by 2020, and to meet the current U.S. average by 2030.

Increase Postsecondary Graduation Rates

Six-yr graduation rate of bachelor's degree students



Sources: Dept. of Education, National Center for Higher Education Management Systems

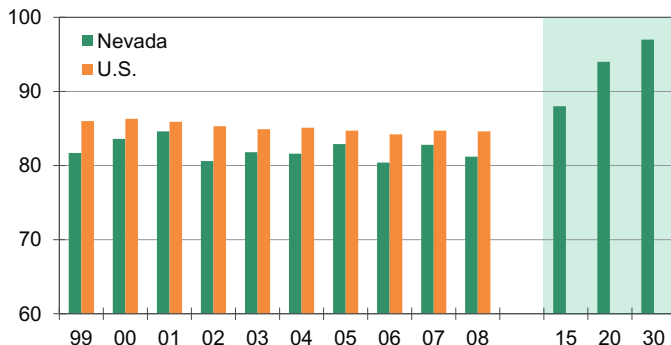
The Department of Education provides data on first-time full-time degree-seeking students at Title IV institutions, allowing for a graduation rate for postsecondary education. Selecting the bachelor's degree graduation rate and examining the six-year time frame, rather than the traditional four years, show a standardized comparison while displaying that some students who do not finish in four years will complete their degree soon thereafter. The goals are to show modest progress by 2015, to halve the gap with the nation by 2020, and to meet the current U.S. average by 2030.

Key Metrics

HEALTH & WELL-BEING

Health Insurance Coverage

Individuals with health insurance, as a % of the population

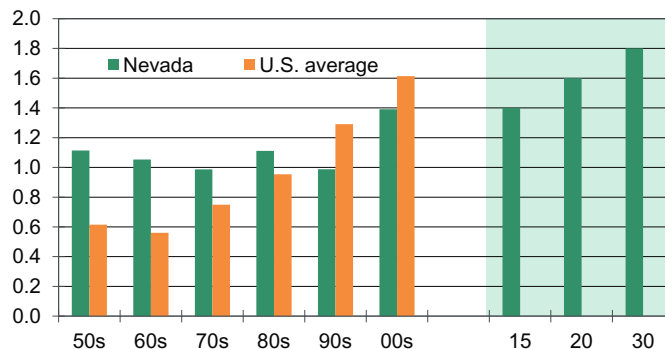


Source: Census Bureau

Expanding enrollment in Medicaid and CHIP programs is an important near-term strategy that would effectively expand healthcare insurance coverage. This would help to achieve two important goals: expanding Nevadans' access to quality healthcare services and containing overall healthcare costs. In response to and with the assistance provided by current federal programs and federal health insurance reform, a target of 94% coverage by 2020 would match projected national averages.

Healthcare Revenue From Federal Sources

Federal health-related revenue, as a % of state general revenue



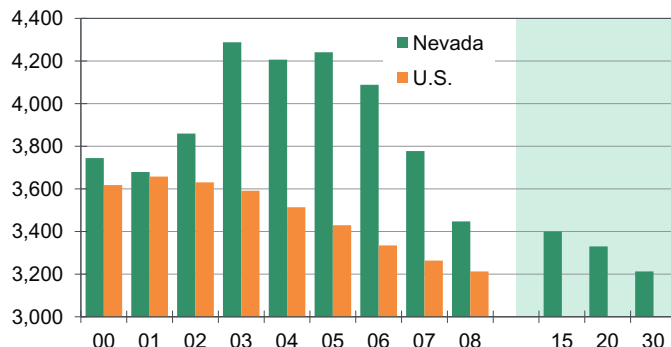
Source: Census Bureau

By restricting eligibility for programs for which Nevada receives federal assistance to insure children and the poor, a greater share of state healthcare expenses must be paid by state residents. Nevada should set out to raise its share of federal healthcare funding to 1.8% of revenues by 2030, bringing it more in line with other states.

PUBLIC SAFETY

Promote Low-Crime Environment

Property crimes per 100,000 population

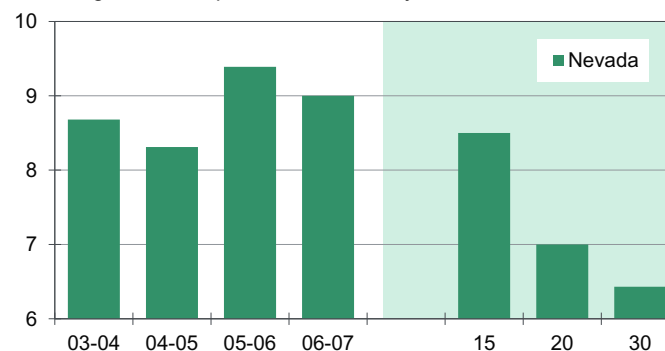


Sources: Census Bureau, Federal Bureau of Investigation, Moody's Analytics

According to the Federal Bureau of Investigation's Uniform Crime Reports, the property crime rate includes incidences of burglary, larceny-theft, motor vehicle theft, and arson. The goals are to extend recent improvement in 2015, to halve the gap with the nation by 2020, and to meet the current U.S. average by 2030.

Minimize Substance Abuse

Illicit drug use in the past month, %, 12 yrs and older



Sources: SAMHSA, Moody's Analytics

Data from the Substance Abuse and Mental Health Services Administration's survey show the level of substance abuse in Nevada. Lowering that level will improve the quality of life for families and communities as it reduces the state's crime rate. Because Utah's substance abuse rate is the lowest within the Mountain West, Nevada's goals focus on narrowing its gap with Utah. The goals are to extend recent improvement through 2015, halve the gap with Utah by 2020, and meet that state's current average by 2030.

Key Themes



Workforce development

Nevada needs to develop a skilled and flexible workforce that can thrive in the 21st century economy.

A skilled and adequate workforce raises the productivity and competitiveness of employers in the state and encourages other firms to relocate to Nevada. A more educated workforce creates more economic value, leading to stronger income growth and better overall household well-being. Making training and educational opportunities available to all Nevadans advances equity across the state.

To meet Nevada's healthcare and education goals, it is particularly important to im-

prove employee training and retention rates in light of labor shortages in these fields.

Many of the growth industries that Nevada wants to attract also require a skilled workforce, including workers with math, science and engineering degrees.

Building on current strengths in the workforce and the economic structure of Nevada is key to diversifying the state's economy. For example, Nevada has developed world-class expertise in public safety and security. New regional or national training centers could use such expertise

not only to train the local workforce but also to attract new jobs and funding. Links among the private sector, state and local educational institutions, and federal facilities could also foster such initiatives, again illustrating how connectedness can help shape a future vision for Nevada.

A highly educated and skilled workforce is an absolute necessity for the development of a sustainable energy industry. Greater educational attainment and higher incomes also lead to better health, longer life spans, and improved public safety.



Connectedness and coordination

Increased collaboration between public and private sectors, among communities within the state, and with other regions and the federal government will foster growth, access, and efficient resource allocation.

Given Nevada's widely dispersed communities and markets, internal and external connectedness is a key factor in its quality of life.

An improved transportation infrastructure within Nevada and between the state and its major trading partners would further economic development, help sustain the environment, and promote equity among its citizens. Opportunities for improvement include highway development between Reno and Las Vegas as well as between Las Vegas and Phoenix. Connections between Nevada and southern California could also be strengthened with alternative transportation options such as high-speed rail. The highly developed airport infrastructure already in place guarantees long-term links with the global economy.

Connectedness applies to energy as well as transportation. For example, Nevada has ample resources to develop renewable energy, but connections are needed to link energy resources to markets within the state and elsewhere. Nevada's renewable energy producers must have a sufficient transmission infrastructure available to export energy to high-demand markets outside the state. Such connections would cross federal lands, illustrating the necessity of collaboration among federal, state and private entities.

Coordination among different levels of government and the private sector can shorten distances and equalize opportunities. This can include communication and training for state agencies, local governments and community groups so that each can leverage its work on that of others and so that all can take

advantage of federal resources. Sometimes it is as simple as helping smaller communities learn about grant opportunities and acquire the skills needed to take advantage of them.

Public-private partnerships and collaboration across agencies and levels of government are important on many fronts. Communication across agencies is particularly important for the effective governance of rural communities. Community-based alternatives to institutional elder care, mental health/behavioral care, incarceration, and parole can greatly improve efficiency.

Private firms and households also need to work with the government to ensure that public educational institutions produce the skills required by businesses, and to nurture systems of philanthropy and private giving as they catch up with Nevada's rapid growth.

Utilization of federal resources

Nevada needs to help residents benefit from federally managed resources within the state and make better use of available federal funds to leverage state revenue.

The federal government owns 86% of the land in Nevada and thus wields enormous influence over activities critical to the state's economy and quality of life, including agriculture, minerals, transportation, energy and recreation. The NVSG seeks appropriate levels of partnership with the federal government to make sure federal resources benefit Nevadans.

Nevada also receives fewer federal funds than almost any other state. In many cases, the state could leverage its own resources by partnering with existing federal programs. As it is, millions of federal dollars that might support public services in Nevada are often left on the table. This is a particular problem during recessions, when demand for government aid rises substantially. A good example

is the federal Supplemental Nutrition Assistance Program, also known as food stamps. According to the Nevada Department of Health and Human Services, in fiscal 2010 the state forfeited nearly \$350 million because of nonparticipation.

The state is also forgoing tens of millions of dollars in federal grants. In a recent study performed by Federal Funds Information for States, Nevada ranked last in fiscal 2009 for per capita federal spending on select grants at \$973. The national average was \$1,672.¹ These are funds that typically require no state match and can be used by a number of public and private entities. State agencies, local govern-

¹ Federal Funds Information for States. "FY 2009 Per Capita Federal Spending on Select Grants" (2010). <http://www.ffis.org/node/2100>.

ments and nonprofit entities need the proper resources to search out such grants and apply for them. To support the NVSG's equity goals, such grant-seeking resources should be provided to smaller communities that may not have the capacity to do so on their own.

Effectively linking state, local and private sector programs with federal funds and grants could help achieve goals for health and well-being, transportation, education and workforce development, energy resources, and the environment. Such moves would not only improve the effectiveness of local initiatives but also help smooth out the volatility of public services. This is not to suggest that Nevada should depend entirely on federal resources, only that it should take advantage of available resources whenever appropriate.

Adoption of information technology solutions

New technologies can allow state and local government as well as nonprofit agencies to provide services more efficiently.

The development of an innovative IT infrastructure would greatly facilitate connectedness and cooperation in Nevada among federal, state and local entities, helping them provide services more effectively and efficiently. State and local governments could significantly lower administrative costs with better record-keeping and communication technology. IT investments and improved database management stand to help both public and private entities. Among governments, consolidated beneficiary databases for public assistance and other aid programs, criminal records, and health records can help agencies deliver services and monitor performance.

Given Nevada's size and the sharp contrasts between its rural and metropolitan areas, the development and implementation of an IT infrastructure represent challenges. However, meeting these challenges would promote equity in the provision of services across the state while fostering economic development.

A strong IT infrastructure can help attract new firms and industries to the state. Nevada's economy would benefit from increased diversification as well as growth among its existing businesses.

Expanding technology use by primary and higher educational systems would also

pay dividends in terms of equity. Online courses and other technology-based educational offerings not only improve student engagement but also give all Nevadans access to learning opportunities.

Nevada can maximize its existing IT infrastructure. Key IT competitive advantages are already present at the Nevada Test Site, Yucca Mountain Nuclear Waste Repository, McCarran International Airport, and private firms such as Switch Communications. Sustainable leveraging of these assets will help attract new businesses and industries to Nevada, ultimately benefiting the entire triple bottom line.

Workforce Development Strategies

ECONOMY

Nevada's primary advantage is the influx of young households to the state. If these potential workers are not trained for the needs of growth industries, the advantage will be lost. Nevada's system of higher education is the natural place to address potential skill shortages. Public-private partnerships, similar to the gaming institute at the UNLV College of Hotel Administration, are often successful at developing skills desired by growing firms.

22%

In 2008, fewer Nevada adults held college degrees than average for the U.S. and Mountain states.

EDUCATION

Educational attainment influences an individual's ability to find a job and increases earnings potential. A well-educated population also attracts firms seeking to consider to expand or relocate. Nevada's educational profile constrains its residents' economic potential and is not enticing for many firms. It is important that the state focus on aligning educational opportunities with future job growth potential to ensure that the state is competitive in the long run.

51st

Nevada falls behind all states and the District of Columbia in its high school graduation rate.

HEALTH & WELL-BEING

Healthcare is only about half as large in Nevada as it is in other states, by share of total employment. Demand for resources exceeds supply in a number of key areas such as mental health. For the quality of healthcare to live up to the stakeholders' vision, Nevada must reduce its shortage of healthcare workers by attracting and retaining medical professionals and training new ones.

1.9

The number of new MDs produced in Nevada last year for every 100,000 residents.

PUBLIC SAFETY

The state's diverse population and geography have led it to develop strong public safety and firefighting programs. This expertise could be leveraged into a training facility that would serve the broader region. The presence of such an academy would not only bring jobs and visitors to the state but would also allow Nevada to maintain a highly qualified police, emergency and firefighting workforce to protect and serve its citizens.

1

The National Fire Academy, located in Emmitsburg MD, could be replicated for the western U.S. in Nevada.

Connectedness and Coordination Strategies

ECONOMY

The NVSG noted that local economic development agencies often do not coordinate with one another and sometimes compete against each other. Stakeholders felt there should be a more efficient allocation of resources for local economic development groups and collaboration across local groups to produce a cohesive statewide marketing approach to attract new companies and help expand existing ones. Development agencies can also partner with the state to review the incentive structure for attracting private industry with innovative financing techniques.

ENERGY & ENVIRONMENT

The vastness of Nevada's alternative energy resources provides a channel to diversify the state's economy while reducing reliance on traditional fossil fuels. Improving access to federal land for renewable energy development will provide the key to unlocking the state's potential.

67%

The Bureau of Land Management administers the single largest share of land within Nevada, which highlights the importance of intergovernmental cooperation.

TRANSPORTATION

Major transportation projects that cut across multiple political boundaries will come to fruition only through the coordinated efforts of regional planning. The state and its agencies should work to build relationships between metropolitan planning organizations and various government agencies. Expected growth in international trade over the 20-year horizon will necessitate additional investment in the region's major trade highways and airports.

70%

The vast majority of freight traveling along the CANAMEX corridor moves by truck.

EDUCATION

Young children's access to formalized education gives them an educational advantage and greatly improves their likelihood of completing further educational goals. With no state or national mandate for early-childhood education—private firms and communities can set their young learners on the road to a lifetime of learning by developing programs that reach out to families who could benefit from a curriculum beyond simple daycare.

27.7%

Nevada's preschool-age children are less likely to be enrolled in school than their national counterparts.

HEALTH & WELL-BEING

Nevada's size and geography create challenges in coordinating care across the state. Centralizing responsibility for running federal programs such as Medicaid could help the state use resources more efficiently. In other cases, greater decentralization could be more efficient—for example, expanding the waiver system for home-based care as a less-costly alternative to treatment in institution.

0.4%

Less than one-half of 1% of Medicaid enrollees participated in home- and community-based services.

PUBLIC SAFETY

Police, firefighters, and other emergency service personnel must work together to ensure that residents are adequately protected in the community. Communication across agencies and jurisdictions is necessary to provide a safe and secure environment for residents and visitors. The state should work to foster these relationships by encouraging and creating a framework for communication.

9

The many divisions within the Nevada Department of Public Safety highlight the importance of communication.

Utilization of Federal Resources Strategies

ECONOMY

Nevada can leverage its research and teaching hospitals and healthcare centers to attract public sector grants, just as the Nevada Cancer Center has done. Economic development agencies can promote the private-sector use of BLM lands to get funding for shovel-ready infrastructure and energy projects. The approval of Nevada Energy's proposed north-south energy transmission lines is a good example.

\$973

In a recent study performed by Federal Funds Information for States, Nevada ranked last in fiscal 2009 per capita federal spending.

ENERGY & ENVIRONMENT

The federal government offers various clean energy incentives and grants for financing development of Nevada's solar, wind and geothermal power industries. Alternative energy projects across the state could benefit from this source of short-term funding.

\$122 million

Federal renewable energy grants were awarded under the American Recovery and Reinvestment Act section 1603 for projects in Nevada (July 2009).

TRANSPORTATION

Ultimately, funding for many proposed transportation projects in Nevada will be supplemented by federal aid. Preparations for Nevada's major projects must be sufficient to enable the state can take advantage of future funding opportunities as they become available. The development of a high-speed rail service connecting Las Vegas to southern California may benefit from a low-interest loan from the federal government.

\$2.3 billion

Funds made available through the American Recovery and Reinvestment Act for high-speed rail projects across the country; Nevada did not apply for funding.

EDUCATION

To ensure that its students receive the best possible education, Nevada should exploit all types of federal funding. Although administering education is the function of state and local governments, the funds available from the federal government can enhance students' educational experiences. Monies are available from the U.S. Department of Education, as well as from the U.S. Department of Health and Human Services' Head Start program and the U.S. Department of Agriculture's School Lunch program.

\$3.4 billion

Amount of Race to the Top, Phase 2 funding that was available to states. Nevada applied, but was not a recipient.

HEALTH & WELL-BEING

A higher share of children lack health insurance in Nevada than in almost every other state due to low rates of enrollment in federally funded plans such as Medicaid and CHIP. By not using the opportunity to receive federal matching dollars to expand preventive care, the state shoulders a higher burden than necessary in the form of expensive emergency services and lost worker productivity.

35%

The fraction of children living in poverty in 2008 who lacked health insurance, about twice the U.S. average.

PUBLIC SAFETY

Public safety departments require funds to provide adequate services but are not revenue-generating entities. Finding sources of funding from the federal government—either ongoing sources or one-time grants to aid improvement efforts—would greatly expand public safety agencies' ability to properly serve Nevadans and those visiting the state. A well-trained public safety infrastructure, although low-profile when effective, is an important factor.

13

The U.S. Department of Homeland Security offers numerous opportunities to apply for grants.

Adoption of Information Technology Solutions Strategies

ECONOMY

Nevada's goal of attracting high-tech companies can be achieved by building off the state's already-established IT infrastructure related to Switch Communications in the south. This also can be ushered along by healthcare's growing need for electronic data capacity. Yucca Mountain and the Nevada Test Site are also options for the location of a secure government data center.

2.3%

The share of Nevada employment in high-tech industries in 2009 was one-half the U.S. and Mountain State averages.

TRANSPORTATION

Investment in communication infrastructure is an important element in enhancing connectivity across Nevada. Expanding internet access to rural communities in Nevada can help achieve a wide range of goals, including the more efficient transmission of medical information, a tighter connection between state and local law enforcement and emergency response services, and remote learning.

54.4%

Nevada ranks highly among western states in the share of population with access to broadband internet connections.

EDUCATION

The state's large rural population, dispersed outside the three metro areas, would benefit from an expansion of technology-based learning. Indeed, all students would reap benefits from expanded educational opportunities such as online courses and expanded use of technology within the classroom. Additional options for all students to ensure that they have the ability to be taught in a way that meets their learning style will improve overall engagement.

6

Several state-sponsored charter schools that operate entirely or partly online already service the state's students.

HEALTH & WELL-BEING

Shifting from paper to electronic medical record keeping has the potential to decrease errors and lower long-run administrative costs. Making such a transition generally involves a significant upfront fixed cost, however, which has discouraged many small medical practices and clinics from adopting new technologies and software. A window of opportunity may be opening for Nevada to receive federal funds to help support investments made in health IT.

\$25.8 billion

U.S. federal stimulus funds targeted to support improvements in healthcare IT.

PUBLIC SAFETY

Technology innovations can be used by public safety officers for a broad array of purposes, including communication, crime tracking and prevention. The ability to effectively respond to residents' needs can be enhanced by systems that help pinpoint the need and relay timely information to responding officers and central communication workers. Data collection and management that can help target areas of need are improved with proper IT use.

3

Fusion centers are just one example of a format to promote communication among public safety officers.

Focus On | Economy

A stable and healthy economy is essential to Nevada's quality of life. A strong, vibrant and sustainable economy provides all residents with opportunities for work, education, community involvement, and the goods and services necessary for desirable living standards. Strong economic performance is also intertwined with other quality-of-life measures such as access to effective education, a solid transportation and public-safety infrastructure, a healthy population, and an efficiently functioning government.

Nevada has been fortunate to have a traditional core economic driver in the tourism and gaming industry, which has the ability to expand rapidly as living standards rise both at home and abroad. Nevertheless, the state's economic structure has some limitations. While Nevada's economic model has proved capable of long-term growth, the state's reliance on gaming leaves its residents highly exposed to short-term economic pitfalls. The industrial structure is slowly shifting toward a more stable mix but remains highly concentrated in a few relatively volatile industries. In addition to gaming, Nevada's economy has been highly dependent on construction, an industry often at risk during downturns, and on mining, which can fluctuate wildly with commodity prices.

As the current national economic recovery transitions into a self-sustaining expansion, Nevada is expected to resume its above-average pace of growth, due largely to renewed in-migration and consumer spending of new households. Nevada's climate, recreational opportunities, low tax base, and natural beauty will continue to draw younger migrants in search of work and retirees in search of a better quality of life and lower costs (see Chart 1).

Households will increase spending on leisure activity and business travel will accelerate.

Yet, while Nevada's growth will exceed that of other states, the pace will pale in comparison with that of recent business cycles, largely because of slower growth in demand for the goods and services of Nevada's dominant consumer-oriented industries. These industries are highly dependent on national, and even global consumer demand. A report by the Brookings Institution found that in 2008, no other metropolitan area in the nation generated more output from service exports than did Las Vegas.¹ No other state in the nation has an economy that is as dependent on leisure and hospitality, retail, and construction as Nevada's. These industries together make up nearly half Nevada's employment base. In Hawaii, the state with the second-highest concentration, these industries account for one-third of the state's jobs (see Chart 2). The decline of these industries during the recent recession was devastating for Nevada's economy and illustrates the danger of having such a high exposure to a few consumer-oriented industries.

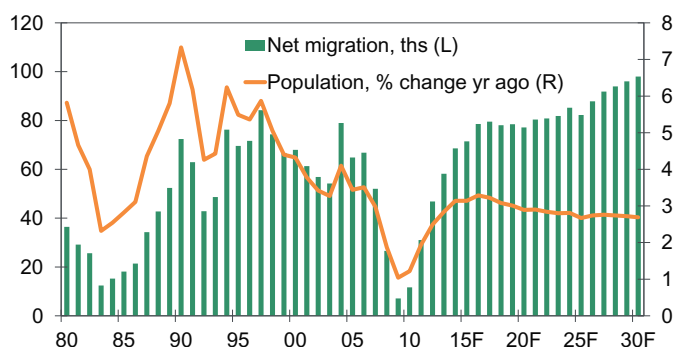
¹ http://www.brookings.edu/reports/2010/0726_mountain_exports_muro.aspx

Though the worst may be over, the consumer sector's recovery is still precarious, and for the next several years consumer spending will face downward pressure. The loss of household wealth in recent years will remain a heavy weight on consumer spending. From its peak in mid-2007 to its low point in early 2009, U.S. household net worth—the difference between what households own and what they owe—declined by some \$17.5 trillion, or more than 25%. With firmer stock equity and house prices since then, net worth has recovered somewhat, but it is still down by \$12.5 trillion from its peak according to the Federal Reserve (see Chart 3).

The impact of lost wealth on consumer spending is evident in the increase in the personal saving rate. When net worth was at its peak in the summer of 2007, the personal saving rate was close to an all-time low of 2% (see Chart 4). Many households were dissaving, by tapping equity from their houses. With home equity now depleted and mortgage lending standards tighter, many individuals in their prime earning years have an acute need to save.

If the historical relationship between wealth and saving holds true, every dollar lost in

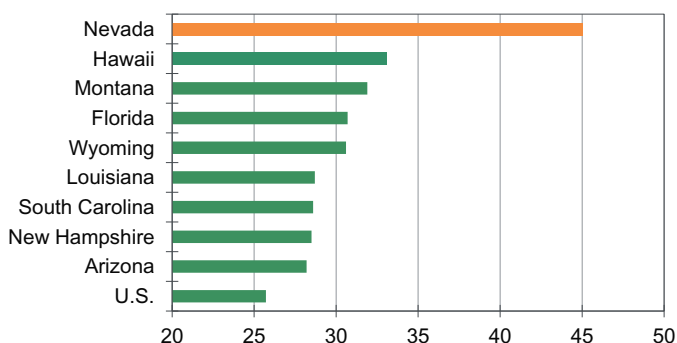
Chart 1: Nevada Will Still Attract Migrants



Sources: Census Bureau, Moody's Analytics

Chart 2: Dependence on Consumers Is Risky

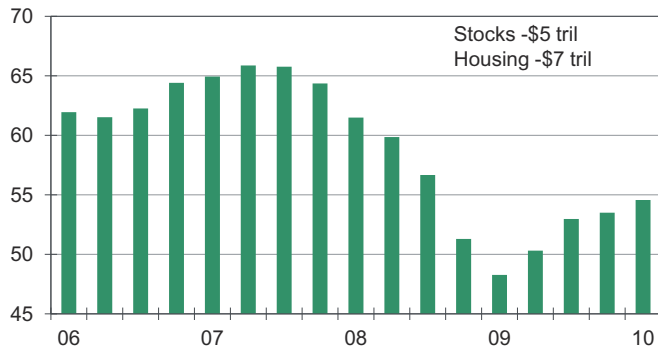
Employment in retail, leisure/hosp. & construction, % of total, 2009



Source: BLS

Chart 3: Nest Eggs Are Being Rebuilt

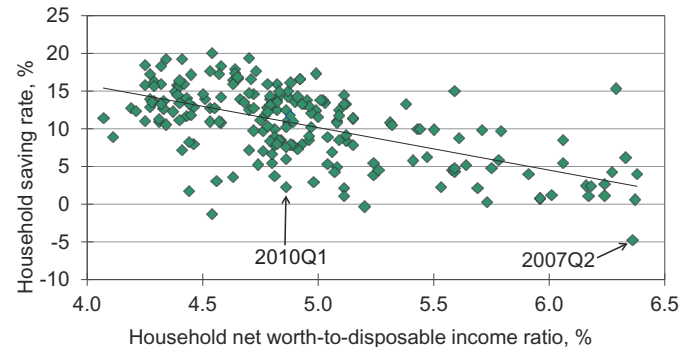
U.S. household net worth, \$ tril



Source: Federal Reserve

Chart 4: An Inflection Point for U.S. Consumers...

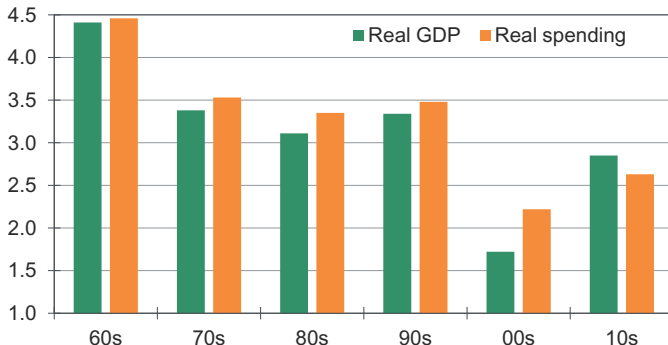
Saving vs. wealth, 1960-present



Sources: Federal Reserve, BEA

Chart 5: ...So Spending Will Not Lead Economy

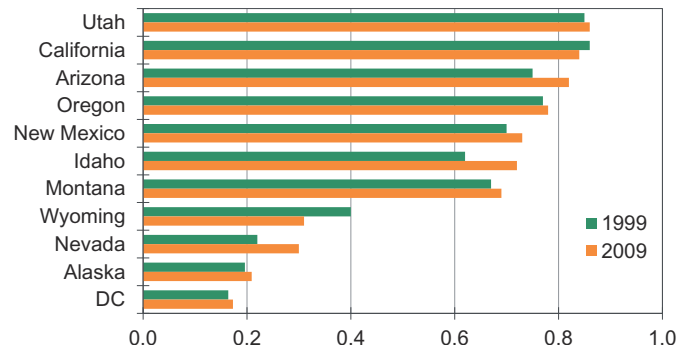
Average % change, U.S.



Sources: BEA, Moody's Analytics

Chart 6: Industrial Diversity Index

U.S.=1.0



Source: Moody's Analytics

wealth will cut approximately 5 cents from consumer spending. Many factors influence saving decisions, and the magnitude of the wealth effect and deleveraging is a matter of considerable debate, but it is reasonable to conclude that the financial crisis marks a major inflection point for U.S. consumers (see Chart 5).

Beyond the recent recession's impact on consumer spending, labor income will fall as large population cohorts in the U.S. and Europe approach retirement age. Thus, sources of growth other than consumer spending and leisure travel will have to materialize if the Nevada economy is to maintain the kind of growth it had experienced historically.

As measured by the Moody's Analytics industrial diversity index², which compares the in-

dustrial structure of states with that of the U.S. overall, only Alaska and the District of Columbia are less diverse than Nevada (see Chart 6). Fortunately for these two areas, their concentrations in government, military and energy have provided stability even during the recession. Although Nevada's industrial mix differs from region to region, each area tends to have low industrial diversity. Carson City's economy, with its dominant government workforce, is the least diverse among the state's three metro areas, while Reno's is the most diverse (see Chart 7).

This lack of diversity and the Nevada economy's high exposure to discretionary consumer spending and commodity prices make employment in the state more than twice as volatile as in the nation overall (see Chart 8). Recently, Nevada has had the most volatile employment growth in the country, with correspondingly large swings in household incomes, housing markets and tax revenues. All metro areas of the state exhibit above-average

volatility. Unlike most state capitals, that are stabilized by a large public workforce, Carson City experiences severe business cycles because of its exposure to cyclical manufacturing and gaming (see Chart 9).

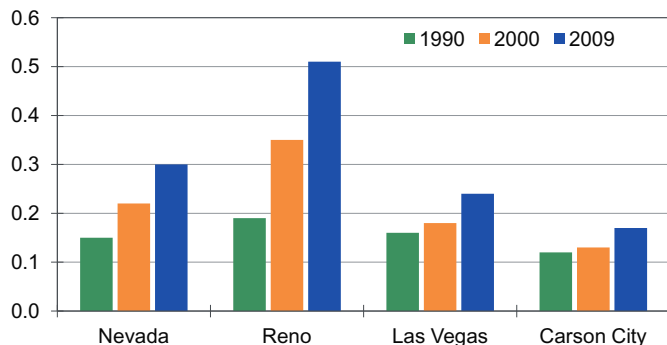
Nevada's dependence on a small number of key industries leads to a modest growth outlook and also exposes the state to boom-bust business cycles. Volatility hurts regional economies in two primary ways: First, uncertain future demand conditions can deter firms from investing in workforce or facilities. Volatile growth also hurts regional economies by distorting spending decisions by firms, households and governments. Abrupt losses in income and tax revenue can weaken public and private balance sheets, which in turn can force sharp spending cutbacks during periods when credit is tight.

Nevada's lack of economic diversity has further implications for the future in that it has left the state with relatively little exposure to high-growth industries. With

² The diversity index compares the employment distribution across industrial sectors in the economy. States whose distribution most closely corresponds to that of the U.S. are deemed the most diverse. Those that diverge the most from the U.S. employment distribution are deemed the least diverse.

Chart 7: Reno Is the Most Diverse

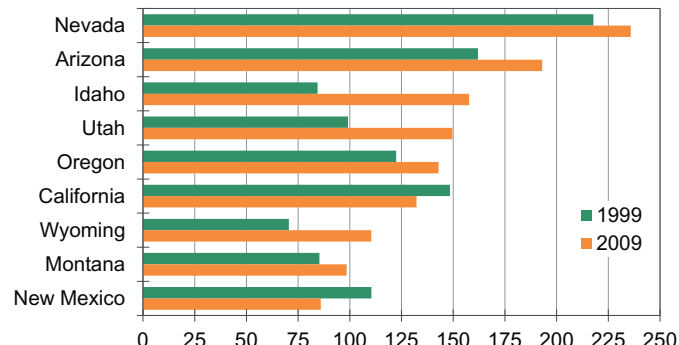
Industrial diversity, U.S.=1.0



Source: Moody's Analytics

Chart 8: Nevada Has Most Volatile Economy

Volatility index: % of U.S. volatility



Source: Moody's Analytics

gaming and construction both mature, new engines of growth will be required. Over the next 20 years, Moody's Analytics expects employment in Nevada's leisure/hospitality industry to grow at an average annual rate of 3%. This compares with growth of 3.8% between 1990 and 2005. For construction, the average job growth rate over the next 20 years is projected to slow to less than 4%, down from more than 7% over the past 15 years. Employment in construction is not expected to return to its prerecession peak until the middle of the next decade. Construction employment relative to the number of households in Nevada will not return to the prerecession peak until much later than that. This underscores the need for the state to branch out into other industries that can make up for some of the lost momentum in these consumer-dependent industries.

A vision for the Nevada economy

The Nevada Vision Stakeholder Group set forth two primary goals for Nevada's economy. The first is to reduce volatility not only in the state's broad economy but also in the flow of state and local government revenue by diversifying Nevada's economy. Economic diversification leads to stability and spreads downside risk across industries, reducing employment volatility. Diversity creates opportunities to develop well-paying jobs in high value-added industries that will keep Nevada competitive in a global economy. Such jobs require a wider array of skills and increased workforce quality, which also demand more from education and training systems.

The growth of industry clusters, which spur the creation of vertically integrated industries that capture value at various stages of production and service, paves the way to a more diverse economy. Promoting diversity does not simply mean changing the economic structure of the area; it demands that such changes not come at the expense of viable industries. Indeed, current industries can become the centers of larger clusters.

The second goal, which often overlaps with the first, is to use Nevada's existing infrastructure and abundant natural resources to attract clean energy producers and other high-tech and high value-added firms. The NVSG looked to areas where Nevada's existing infrastructure and cost structure would provide lasting comparative advantages for producers. The fertile ground for industry expansion in Nevada lies in its natural resources, healthy migration trends, low tax structure, existing infrastructure, access to markets in California and Asia, and the existing skilled labor force and supply chains of its dominant industries.

Expanding high-tech and green jobs would lessen Nevada's dependence on traditional industries and improve its growth potential. Moreover, many high-tech industries support other drivers of the economy.

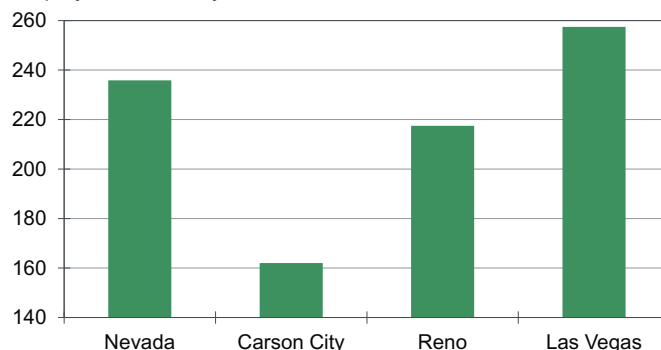
For example, information systems development is becoming increasingly important in medical record-keeping. Nevada is uniquely suited to a variety of environmentally friendly jobs, especially in the area of alternative energy generation. Such industries could attract a highly skilled and innovative labor force. Many could also help reduce the state's already-small carbon footprint and conserve natural resources.

The stakeholders expressed pride in the general environmental awareness of Nevadans and the track record of the government in working with businesses to arrive at environmental solutions. Members referred to the energy efficiency of the Nevada economy, water conservation efforts, the density of urban areas, and local builders going green.

The goals of diversifying the economy and attracting high-growth industries to the state are intertwined. Many of the strategies that follow could be applied to either goal.

Chart 9: Boom-Bust Cycles Across the State

Employment volatility index: U.S.=100, 2009



Source: Moody's Analytics

GOAL	OBJECTIVE	METRIC	STRATEGIES
Reduce volatility in Nevada's economy	1. Diversify Nevada's industrial base	» Moody's Analytics volatility index	<ul style="list-style-type: none"> » Vertically integrate new firms with existing industries » Promote collaboration and cooperation among the state's economic development agencies
Attract high-growth industries to Nevada	2. Leverage Nevada's natural resources and existing infrastructure to attract technology-producing and green industries	<ul style="list-style-type: none"> » Venture capital funding » High-tech share of total employment » Transportation/warehousing share of total employment » Moody's Analytics industrial diversity index 	<ul style="list-style-type: none"> » Increase venture capital funding » Promote and expand R&D clusters in healthcare » Promote Nevada's core assets to relocating firms » Review incentive system and improve upon already-good regulatory environment » Improve transportation linkages within the state and with other states in the region » Attract and train skilled workers » Streamline process of private use of BLM lands

GOAL 1

Reduce volatility in Nevada's economy

OBJECTIVE #1
Diversify Nevada's industrial base

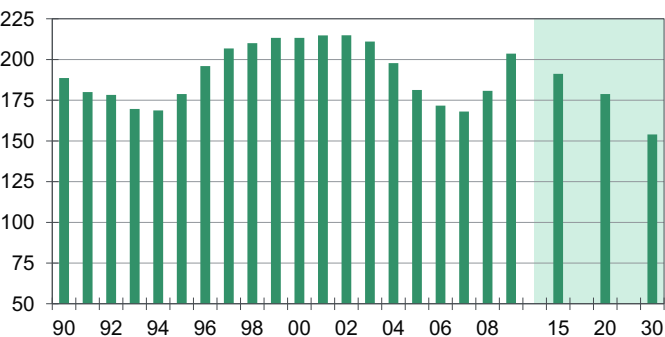
METRIC

Moody's Analytics volatility index

Employment volatility is defined as the standard deviation in a state's employment growth relative to the standard deviation in U.S. employment growth. Volatility of 100 means employment in a state is as volatile as in the nation as a whole. Nevada's volatility index in 2009 was double the U.S. average and the highest in the nation. The 20-year goal assumes Nevada bridges half the gap between its volatility index and that of the median state. That would put Nevada's volatility index near 190 in five years, at about 180 in 2020, and just above 150 by 2030.

Reduce Economic Volatility

Volatility index, U.S.=100, 3-yr MA



Source: Moody's Analytics

STRATEGIES

Vertically integrate new firms with existing industries

Which industries should be expanded to diversify Nevada's economic base? Obviously, industries with the best growth prospects are prime candidates. Yet competition is often intense among states to attract leading industries. Economic development efforts in many regions center on the same set of hot industries—chipmakers in the 1990s, biotech firms in the 2000s, or clean energy producers today. Stakeholders felt strongly that for meaningful diversification to take place, development efforts must target firms for which Nevada's unique regional comparative advantages lead to long-term cost savings (see Chart 1).

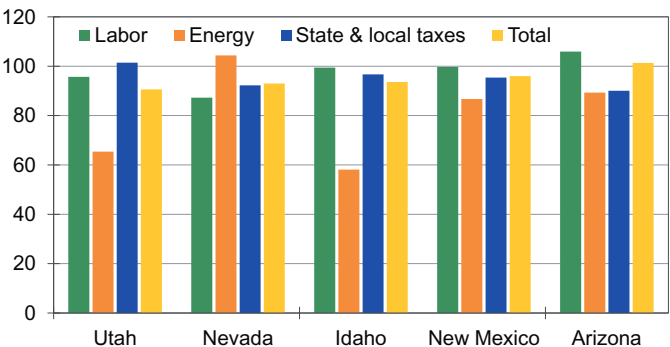
Successful established industries are the first place to look for

significant local cost advantages. Vertical integration of existing industries into their downstream suppliers or upstream customers can exploit these advantages. For example, proximity to local mining operations may provide transportation cost advantages for manufacturers and processors of rare-earth minerals further along the production chain. Gold is Nevada's largest exported good. Precious metals development could expand from mining through refining to the production of final products such as jewelry and industrial and tech goods that are now made primarily outside the state.

Similarly, industry clusters can enjoy local cost advantages if they depend on the same production inputs as do current

Chart 1: Highly Competitive on Labor and Taxes

Cost of doing business index, U.S.=100, 2008

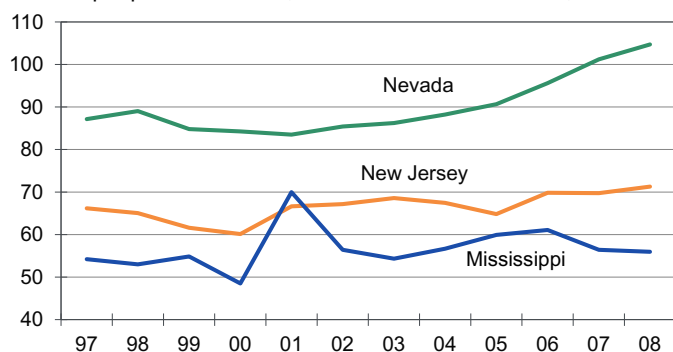


Source: Moody's Analytics

STRATEGIES (Continued)

Chart 2: Gaming Workers Are Very Productive

Real output per worker: arts, entertainment & recreation, 2000\$



Sources: BEA, BLS, Moody's Analytics

firms. For example, entertainment production, design and technology firms could locate near Las Vegas to take advantage of the metro area's world-class status as the premier entertainment and hospitality destination. The knowledge and skills of gaming industry professionals in Nevada are second to none and could be used to

attract related industries. Nevada entertainment workers are nearly twice as productive as those in other states with a large gaming presence (see Chart 2). The sophisticated security networks associated with the gaming industry also could be exported to other areas or private sector and public sector entities in need of the indus-

try's knowledge of high-tech security systems.

The skilled workforces of Nevada's government and primary industries can also attract new firms to the state. For example, the challenges that Nevada's fire and police departments face because of the state's huge tourist population and its expanse of undeveloped land have given them valuable expertise that could be shared with public safety personnel in other states through a training academy.

Promote cooperation and collaboration among the state's economic development agencies

Implementing strategies of vertical integration and industry agglomeration requires practical efforts at the state and local levels and can be achieved through partnerships and co-

ordination between the public and private sectors. The NVSG noted that local economic development agencies often do not coordinate and sometimes compete with one another. Stakeholders felt there should be a more efficient allocation of resources and collaboration among local groups to produce a cohesive statewide marketing approach to attract new companies and help expand existing ones. The Nevada Commission on Economic Development could recruit more talent specializing in grant writing and helping companies seek public and private funding. The stakeholders noted that Nevada's "small-town feel" facilitates easy contact between businesspeople and policymakers and can be used to foster cooperation and more centralization in development efforts.

GOAL 2

Attract high-growth industries to Nevada

OBJECTIVE #1
Leverage Nevada's natural resources and existing infrastructure to attract technology-producing and green industries

Stakeholders identified several infrastructure assets with the potential to offer long-run cost savings to private firms. These include modern airports in both the north and south, commercial rail corridors in the north, ample convention and hotel space, the IT infrastructure associated with Switch Communications, and the extensive existing resources associated with the Nevada Test Site and Yucca Mountain. Nevada's natural resources also provide comparative advantages. Its vast land area brings recreational opportunities, valuable minerals, and solar and geothermal resources. Its location gives Nevada good access to large consumer and export markets, most notably in California and Asia.

METRIC

Venture capital funding

Venture capital funding is a good proxy for innovation in a state or industry. Venture capital dollars usually flow into fledgling high-skill, high-tech firms and industries. Biotechnology, medical equipment and device manufacturing, energy, and media/entertainment industries are near the top of the list of industries receiving venture capital funding in recent quarters; these are the same industries the stakeholders would like Nevada to attract. The 20-year goal for Nevada is for the state to grow venture capital investments to \$300 million, which would be about two thirds the U.S. average excluding California 10 years ago. Venture capital funding is highly cyclical, so 2009 levels are depressed from their long-run averages. In five years, Nevada should aim for \$100 million in funding—about the average level of venture capital placements in neighboring states last year—and in 10 years the goal is to draw \$200 million in funding annually.

STRATEGY

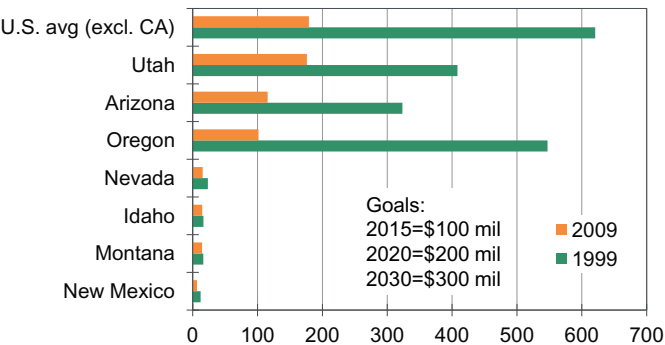
Increase venture capital funding

Stakeholders expressed strong support for efforts to expand clean energy production in the state. Clean energy production is a prime example of a growth industry that can benefit from Nevada's existing infrastructure, human capital and natural resources. Given its comparative advantages, Nevada should do well compared with the many other states chasing energy-related firms. The infrastructure associated with Hoover Dam; geothermal resources; ample sunlight, land and wind; and, most important, proximity to the California market, all represent comparative advantages for Nevada.

The state's various economic development entities as well as established businesses should work to attract venture capital investments in clean energy production. Venture capital placements are an important way to spur organic private sector growth in cutting-edge, fledgling businesses that larger, public development entities and mature companies consider too small or too risky to invest in. Venture capital placements in Nevada are far below average. Through local and statewide economic development agencies, the state could coordinate an investment council that would market itself to venture capitalists.

Attracting Private Investment Is Key

Venture capital funding, \$ mil



Source: PWC/Venture Economics/National Venture Capital Assoc. MoneyTree Survey

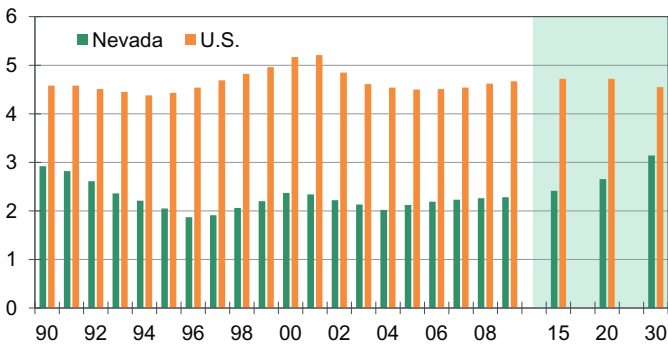
METRIC

High-tech share of total employment

The Moody's Analytics high-tech employment aggregate includes 18 detailed industries, spanning medical and biomedical research and manufacturing, telecommunications, computer systems design, software development, and a host of other tech manufacturing and service industries. As of 2009, Nevada's share of these industries was half the U.S. average. The 20-year goal assumes the state will bridge half the gap with the median U.S. state share, bringing tech's share of Nevada jobs to just over 3% by 2030. In five years, the share should be 2.4%, and by 2020 the state should be halfway to its goal, with high-tech accounting for around 2.7% of employment in the state.

Fertile Ground for Tech Expansion

High-tech employment, % of total



Sources: BLS, Moody's Analytics

STRATEGY

Promote and expand R&D clusters in healthcare

The aging population and presence of university medical facilities in both the north and south suggest the potential to form a healthcare cluster that goes beyond providing services. Demand for health services in Nevada will grow rapidly over the next two decades as older households increase as a share of the population and as federal healthcare reform widens access to health services. This demand could support many highly paid jobs among healthcare providers, researchers and support services. For example, the capacity for data storage and exchange in Las Vegas could be exploited by support firms in the growing field of medical informatics. The expansion of healthcare services and research in the state would have the added benefit of helping to insulate

the economy from business cycle fluctuations, since health services tend to be noncyclical.

The University of Nevada School of Medicine in Reno and the University Medical Center in Las Vegas, as well as the Children's Hospital of Nevada and the Cleveland Clinic could form the nucleus of a healthcare cluster with state-of-the-art research, creating spinoffs in the medical equipment and supply fields. The Nevada Cancer Institute already has attracted public and private money that could transform it into a national cancer center. The agglomeration of medical research and R&D in Nevada could also be achieved by attracting venture capital funding, through a philanthropic outreach program, or through the aggressive recruitment of grant writers and researchers at the Cleveland Clinic and UNLV.

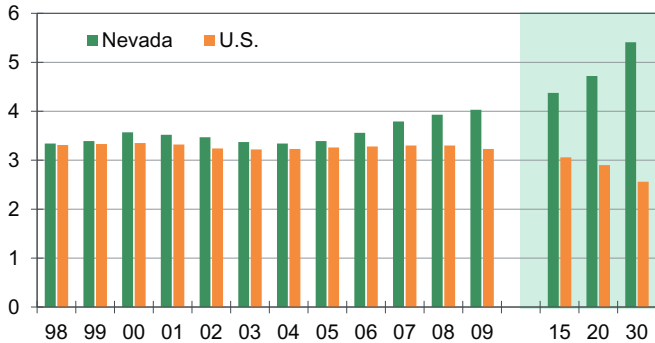
METRIC

Transportation/warehousing share of total employment

Nevada's concentration of transportation, distribution and warehousing employment is already above the national average, though some of the recent increase occurred as other industries, such as construction and gaming, fell as a share of total employment. Still, the state's strategic location near large consumer export markets, low labor costs, and business-friendly climate give Nevada an advantage. The five- 10- and 20-year goals are for the state to increase its concentration in these industries at the same rate as it has over the past decade.

Expand on Strategic Locations, Costs

Transportation and warehousing employment, % of total



Sources: BLS, Moody's Analytics

STRATEGY (Continued)

advantages with proximity to markets. Similarly, Southern Nevada is developing this industry cluster to utilize its tax advantages and proximity to Southern California markets. There is considerable development potential remaining to serve these very large markets. Nevada's relatively manageable environmental regulation, especially relative to California, and its lack of an inventory tax create incentives for these firms to operate in Nevada.

Stakeholders also recommend reinventing Yucca Mountain and the Nevada Test Site for energy development, a national laboratory, security technology, secure and protected data processing, or a government

data center, among other potential uses. This would leverage existing infrastructure with high-tech potential. These sites have the capacity for storage, tech research and goods production—activities that could create spinoffs in Nevada's cities and towns, broadening economic activity. The sites also could be used in conjunction with alternative energy research and development at the state's universities. UNLV's Center for Energy Research recently won a grant to build a solar energy facility on the Nevada Test Site, for example. These types of energy-related research projects are good examples of the kinds of R&D clusters that can be fostered in the state.

STRATEGY

Promote Nevada's core infrastructure assets to new and existing firms. Core assets include Switch Communications, airports and rail links, Yucca Mountain, and the Nevada Test Site.

Switch Communications, a powerful and energy-efficient fiber optics data center located in Las Vegas, can attract other firms that support or need large-scale data processing, and it could increase the efficiency of existing firms. It is easy to envision the data center's use in biomedical research involving the Cleveland Clinic, the

Nevada Cancer Institute, and the Ruvo Brain Institute, and in informatics, medical records, gaming design, auto design, and computer-generated graphics.

Nevada's central location and its commercial rail and airport facilities make it a natural home for transportation and distribution. As exports and investment assume a larger role in future U.S. economic growth, they will fuel demand for transportation and warehousing. The supply management cluster is growing in Northern Nevada because it serves nearby Northern California, combining the state's tax

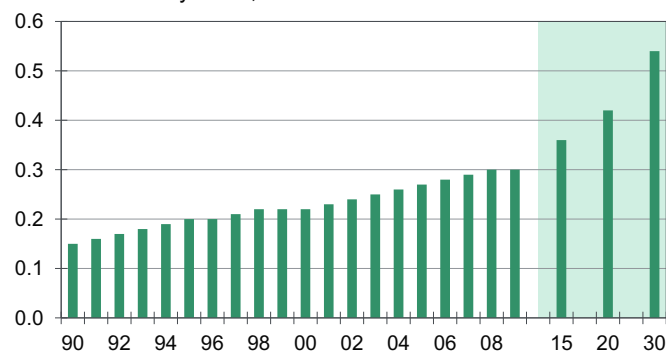
METRIC

Moody's Analytics industrial diversity index

Industrial diversity is defined as the extent to which a state's industrial structure corresponds to the U.S. industrial structure. Diversity is measured between 0 and 1: A 1 means the state has the same industrial structure as the U.S. A 0 means the state and U.S. structures have nothing in common. This index allows comparison of different regions. The five-, 10- and 20-year goals for Nevada's industrial structure are measured against the 2009 average of the diversity indices of Arizona and New Mexico. By 2030, Nevada should close the gap in its diversity index with these states—now 40%—by half. This means Nevada's industrial diversity index should be near 0.54 in 2030, which is also near the median for all states. To get there, it should increase to 0.36 in five years and be at 0.42 by 2020.

Increase Industrial Diversity

Industrial diversity index, U.S.=1



Source: Moody's Analytics

STRATEGY

Review incentive system and improve upon already-good regulatory environment

Nevada's low-tax environment and relatively small bureaucracy already provide businesses with an attractive regulatory environment in which to operate. The state should aim to maintain this advantage by reviewing its incentive programs. The extent to which the state

can provide financial support to private enterprises can be reviewed to determine how best to maximize such incentives as tax breaks, tax credits, and tax rebates and exemptions. The state may also be able to provide new and expanding businesses with low-cost loans for the development of infrastructure and capital expenditures through a state economic development and infrastructure bank.

STRATEGIES (No Metrics Available)

Improve transportation linkages within the state and with other states in the region

For Nevada's transportation and distribution cluster to fully realize its potential, the state must improve its transportation linkages to increase the attractiveness of the state to relocating firms and allow established firms to expand. Stakeholders agreed that the construction of an interstate highway connecting Las Vegas to Phoenix is an essential part of not only developing the state's transportation and distribution capabilities, but also of improving access to the state for tourists coming from Phoenix and points south. Stakeholders also feel that expanding freight and long-haul capacity at McCarran International Airport in Las Vegas would leverage its already-efficient operations (it ranked fifth among the nation's major airports for on-time departures last year) and allow the transportation/distribution industries to expand further.

needs of growth industries, the advantage will be lost. Nevada's system of higher education is the natural place to address potential skill shortages. Public-private partnerships, similar to the gaming institute at the UNLV William F. Harrah College of Hotel Administration, are often successful at developing the skills that growing firms desire.

A diverse economy requires a workforce qualified in a wide variety of occupations. Training skilled workers is critical to attracting new-economy, high-tech and green industries that have choices regarding location. Technical and community college programs should produce workers with technical skills. Universities and colleges must train top-level research and administrative workers. Attracting satellite operations of businesses in other states, especially high-tech and science-based firms, will require highly skilled workers as well as training specific to those firms' processes. This makes the labor force attractive to similar businesses.

Attract and train skilled workers needed by growth industries

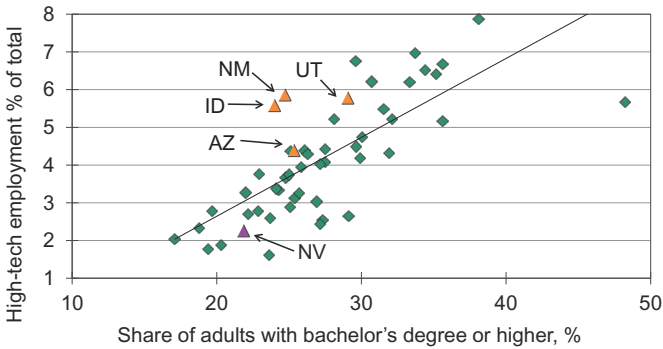
For the typical firm, labor constitutes well over half of all costs. As such, maintaining an ample supply of skilled and affordable labor is of paramount importance to development. This makes the state's weaknesses in education and its shortage of skilled workers a growing risk for economic growth (see Chart 3). Nevada's primary advantage is the influx of young households to the state. If these potential workers are not trained for the

Streamline process of private use of federal lands

One main barrier to the expansion of clean energy production is Nevada's limited access to developable land. More than two-thirds of Nevada's land area is administered by the Bureau of Land Management. Although the state works with the BLM on land transfers and access to rights-of-way, NVSG members believe that a dedicated taskforce could streamline the transfer process and coordinate "shovel

STRATEGIES (Continued)

Chart 3: Tech Firms Need Educated Workers



Sources: Census Bureau, BLS, Moody's Analytics

ready" land use projects. The approval of Nevada Energy's proposed north-south transmission lines is a good example. Transmission lines will allow alternative energy producers not only to supply electricity within the state, but also to export it to neighboring states. Transmission lines are essential for attracting alternative energy production to the state, but their development must be balanced with the need to preserve Nevada's natural beauty.

Focus On | Energy & Environment

In many ways, Nevada is the ideal state in which to develop a renewable energy industry. The state's climate and topography are favorable to solar, geothermal and wind power.

Based on the amount of direct sunlight reaching the ground, Nevada leads the country in solar energy potential.¹ The state also has sizable geothermal resources.

But growth of alternative energy industries in Nevada has been slow. A number of states, including Idaho and California, derive larger shares of their electric power from renewable, nonhydroelectric sources.² Some have suggested that the pace of development in Nevada would be faster if not for delays in processing environmental permits at the U.S. Bureau of Land Management³, which must issue environmental clearances for projects operated on BLM land.

This poses a problem for Nevada, where the BLM manages about two-thirds of the land. Recent efforts to accelerate the permitting process have met with some success, but the delays have prompted calls for the federal government to grant more of its land to Nevada.⁴

In contrast with Nevada's alternative energy potential, the state's water supplies are limited. As in many parts of the Mountain West, water scarcity is a looming threat. In response, Nevadans have adopted strict conservation measures to limit water use.⁵ These efforts have dramatically lowered per capita water consumption over the last two decades, but the rate at which Nevadans use public water supplies remains high relative to the average state.

Nevada's unique strengths and opportunities in this area necessitate a greater focus

on the goal of sustainable growth and strategies to achieve it.

Businesses and households are drawn to Nevada not only because of employment opportunities but also because they find its climate and environmental amenities attractive. This is difficult to measure directly, but Nevada's high rate of net in-migration over the last several decades suggests that many households value the region's amenities enough to accept lower incomes or higher rents for them.⁶ In addition to climate and geography, environmental amenities such as air and water quality can help explain the location preferences of households throughout Nevada.

A perceptible difference between the preferences of households and firms exists: Cities that appear highly attractive to firms may appear less attractive to families or individuals.⁷ For example, the quality of restaurants may help explain where households choose to locate within some cities, but this type of amenity has little effect on business location decisions.

Mostly this reflects businesses' concern with costs and earnings. Resource availability or input costs can strongly influence business choices and shape the commercial development of a region.

The Nevada Vision Stakeholder Group envisions the state balancing the amenities that households desire with the resources and cost structure sought by businesses.

The NVSG also recognizes the need to conserve resources and use them wisely. Shortages or high costs are already having an effect on how Nevada firms and households use resources, notably in regard to water-use efficiency.

At the same time, Nevada has the potential to become a leader in the development of alternative power, demand for which will rise as communities across the West impose greater restrictions on greenhouse gas emissions.⁸

Nevada's concern with energy efficiency is partly explained by the high average cost of power in the state. In 2008, consumers in Nevada paid 9.89 cents per kilowatt-hour.⁹ Nevadans paid slightly more for energy than Arizonans and paid more than the national average.

Nevada's high energy cost structure reflects its reliance on natural gas for a large portion of its power needs. Compared with the average state, Nevada gets less of its electricity from coal, a relatively inexpensive fuel in the current U.S. regulatory structure. Although Nevada's preference for natural gas raises consumers' costs for electricity, it also serves to limit the state's greenhouse gas emissions, which are below average for the nation.

From 1998 to 2008, Nevada's share of power generated by natural gas more than doubled, from 28% to 68% (see Chart 1). In that time, the share of energy generated from coal fell from 56% to just 22%.¹⁰ This transition from coal to natural gas occurred unevenly, with events such as the closure of the coal-powered Mohave Generation Station in 2005 accelerating the shift.

The transition away from less-expensive coal energy generation toward more expensive natural gas generation contributed to

1 Nebraska Energy Office. Comparison of Solar Power Potential by State. 2010. Available at <http://www.neo.ne.gov/statsthtml/201.htm>.

2 U.S. Energy Information Administration. "State Renewable Electricity Profiles 2008" Office of Coal, Nuclear, Electric and Alternative Fuels. U.S. Department of Energy. Washington DC, August 2010. Available at www.eia.gov.

3 Groth, Jim and Robert Nellis. Nevada's Energy Economy Declaration. Office of the Governor. Nevada State Office of Energy. 22 March 2010. Available at energy.state.nv.us.

4 Ibid.

5 Southern Nevada Water Authority. "Conservation Plan: 2009 – 2013." May 2009. Available at http://www.snwa.com/html/cons_plan.html.

6 Blomquist, Glenn C. (2004). "Quality of Life" in A Companion to Urban Economics, ed. Richard Arnott and Daniel McMillen. Malden, MA: Blackwell Publishing, 2006.

7 Gabriel, Stuart A. and Stuart S. Rosenthal (2004). "Quality of the Business Environment Versus the Quality of Life: Do Firms and Households Like the Same Cities?" Review of Economics and Statistics 86(1), pp. 438-444.

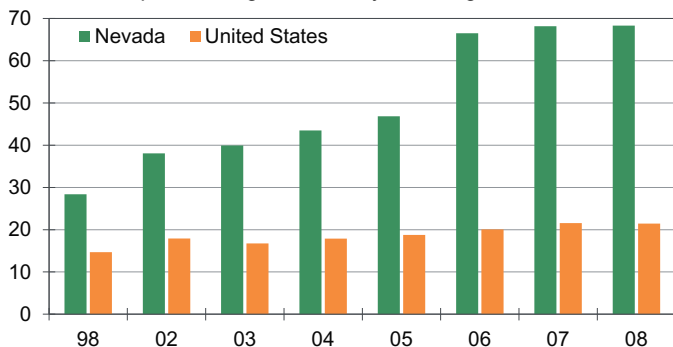
8 Lang, Robert E., Mark Muro, and Andrea Sarzynski. "Mountain Megs: America's Newest Metropolitan Places and a Federal Partnership to Help Them Prosper." The Brookings Institution. Blueprint for American Prosperity. 2008.

9 U.S. Energy Information Administration. "State Renewable Electricity Profiles 2008" Office of Coal, Nuclear, Electric and Alternative Fuels. U.S. Department of Energy. Washington DC, August 2010. Available at www.eia.gov.

10 Energy Information Administration. "State Electricity Profiles: 2008." Office of Coal, Nuclear, Electric and Alternative Fuels, U.S. Department of Energy.

Chart 1: Nevada's Use of Gas Power Is Rising

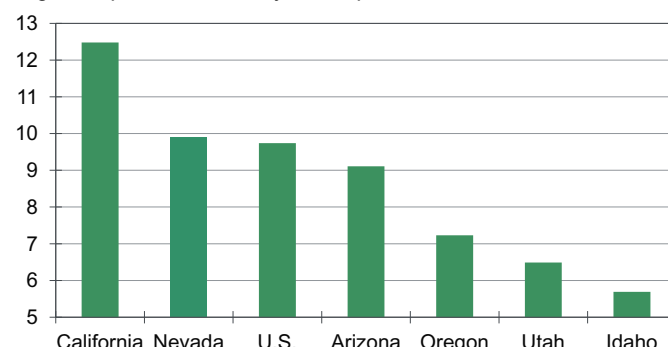
Total electric power net generation by natural gas, %



Source: Energy Information Administration

Chart 2: Energy Is More Expensive in Nevada

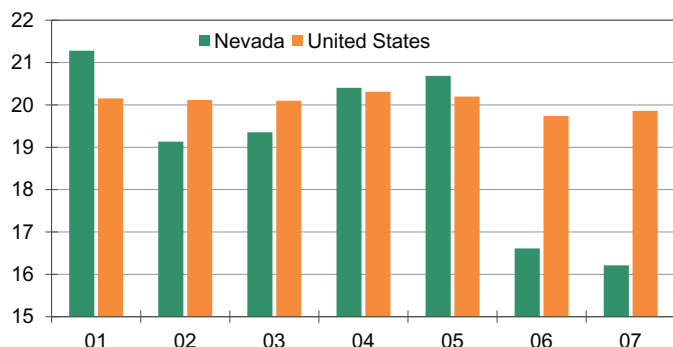
Avg retail price of electricity, cents per kilowatt hour, 2008



Source: Energy Information Administration

Chart 3: Lower Emissions Are a Recent Trend

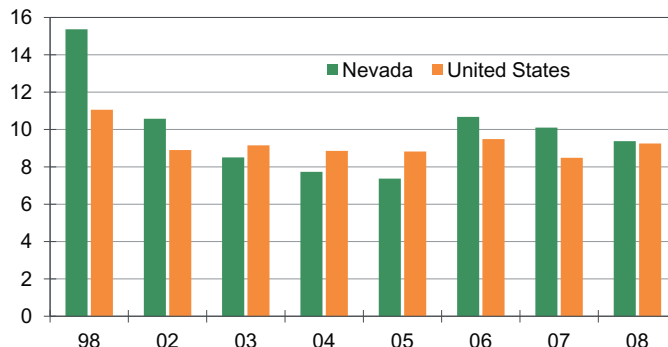
Energy power industry CO₂ emissions, metric tons per capita



Source: Energy Information Administration

Chart 4: Nevada's Renewable Share Is Average

Total electric power net generation by renewable sources, %



Source: Energy Information Administration

a sharp increase in energy prices in the state (see Chart 2). Since 2001, the average price of electricity in Nevada has exceeded the national average by about 10%.¹¹ In 2008, this price ranked second only to California among western states. High energy costs may deter households and businesses from locating in Nevada.

At the same time that power producers in Nevada were substituting natural gas for coal as a main fuel source, Nevada also shifted from being a net energy exporter to a net importer.¹² The change took place in 2005, but by 2008 the state's ratio of electricity supply to consumption had climbed back to 0.97, nearing the threshold

that defines an energy-exporting state. Other states in the West are net exporters of energy, although California is a huge net energy importer.

Electricity generation is a leading factor in determining air pollution levels. Nevada's sulfur dioxide emissions ranked among the lowest in the nation in 2008, and the rate of carbon dioxide emissions per capita was below average. In 2008, Nevada's power industry produced 16.2 metric tons of carbon dioxide per capita, while the national average stood at 19.9 tons (see Chart 3). Pollution output in Nevada fell sharply following the shut-down of the coal-fired Mohave Generation Station.

An alternative measure of pollution intensity in a region's power generation is the amount of pollution generated for each megawatt of electricity produced. On this scale, Nevada ranked 38th in the nation in

2008, producing 1,138 pounds of carbon dioxide per megawatt hour, compared with a national average of 1,326.¹³

Nevada ranks about average in the amount of renewable energy produced within the state. About 9% of the electricity generated in the state comes from hydroelectric or other renewable sources, including geothermal energy (see Chart 4). For renewable energy generation from sources other than hydroelectric, Nevada's market share has been growing since the early part of the decade.

Alternative power sources could be a major source of growth for Nevada's energy industry. Solar and geothermal offer the greatest development potential, since both draw on the state's natural com-

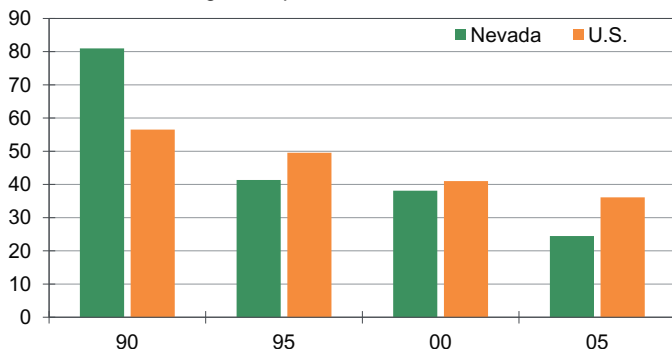
¹¹ Energy Information Administration, State Energy Data System. U.S. Department of Energy.

¹² Energy Information Administration. "Southwest Weathers Closure of Mohave Generation Station." 2009. Updated June 24, 2009. Available at <http://www.eia.doe.gov/electricity/analyses/nevada/nevada.html>.

¹³ U.S. Energy Information Administration. "State Renewable Electricity Profiles 2008" Office of Coal, Nuclear, Electric and Alternative Fuels. U.S. Department of Energy. Washington DC, August 2010. Available at www.eia.gov.

Chart 5: Water Use Efficiency Is Improving

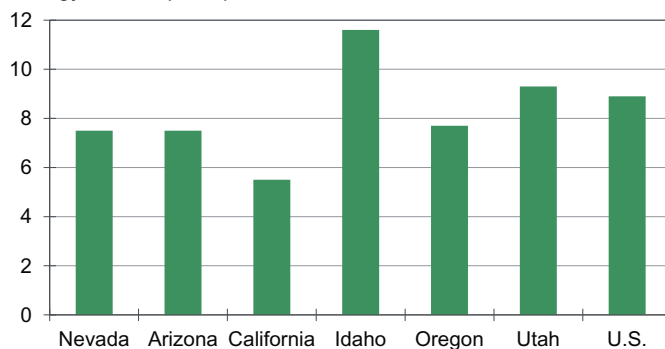
Water withdrawals, gallons per ths \$ of GSP, 2000\$



Source: USGS, BEA, Moody's Analytics

Chart 6: Nevadans Are More Energy Efficient

Energy consumption per \$ of real GDP, ths BTUs, 2007



Source: Energy Information Administration

parative advantages. While the northern half of Nevada contains sizable areas of geothermal activity, the southern half receives an average dose of sunshine per square mile sufficient to support solar energy generation.

A huge potential export market for such power exists right next door. California's government has declared that 33% of the energy supplied in that state must come from renewable sources by 2030.¹⁴

Research and development represents another way Nevada could capitalize on its comparative advantage in renewable energy development. Public-private research centers and a means of transferring new technologies to the private sector could assist in the development of renewable energy industries. Nevada is taking a step in this direction through the creation of the Solar Energy Initiative at UNLV.¹⁵

Federal land ownership poses a challenge to rapid development of renewable energy in Nevada. Before a utility-scale solar project can be built on lands managed by the BLM, that agency must complete an extensive environmental impact analysis, which may lengthen development times. Several measures have been enacted or proposed to lessen this delay, including "fast-track" initiatives to identify land suit-

able for solar development and a bill to impose stricter deadlines on lease sales of land within pre-identified solar development zones.

Future decisions by the BLM could determine the pace at which investment in both power and communication infrastructure can take place. The federal agency is a key player in a number of critical growth areas, from broadband penetration—Nevada ranks high overall, but some rural communities may be underserved—to power transmission lines. A north-south transmission line across Nevada, for example, is necessary to support the development of renewable power across the state, and additional transmission lines might be needed to support energy exports to California and other states.

Water is a precious resource in Nevada, and here the state has managed to boost its efficiency of use. Measures of water consumption, quality and reuse all show progress. Facing few options to expand its water supply, southern Nevada's municipal water plans include a greater reliance on conservation to meet future demand growth.¹⁶ Water supply concerns are less acute in northern Nevada, although planning agencies in the region have also enacted conservation strategies.

Despite Nevada's generally positive record of improving water use efficiency, a public perception may exist that the state

lacks sufficient water to sustain growth over the next several decades. This perception could deter business relocation as much as an actual shortage. Thus, the issue of water availability, real or perceived, is a long-run concern for communities in Nevada as well as in other western states.

There are two ways to examine water use in Nevada: by measuring water use efficiency and by measuring water use per permanent resident. One measure of Nevada's water use efficiency is the ratio of annual consumption per dollar of output. Here Nevada has experienced dramatic improvement; the number of gallons consumed per dollar of real gross state output fell from about 80 in 1990 to around 25 in 2005 (see Chart 5). The improvement caused Nevada to surpass the national average during the 1990s, and it remains a more efficient user of water than most states.

Nevada historically ranked below average among states in water conservation, measured by per capita water use, but the state made rapid improvements after the mid-1980s.¹⁷ Much of the improvement came via more conservative residential and municipal water use. Residential use and irrigation are the main categories of water consumption in Nevada. Thermoelectric power, which accounts for a large share of water use nationwide, plays a smaller part in Nevada's water use profile.

¹⁴ California Office of the Governor. Executive Order S-21-09. Enacted on September 15, 2009. Available at gov.ca.gov.

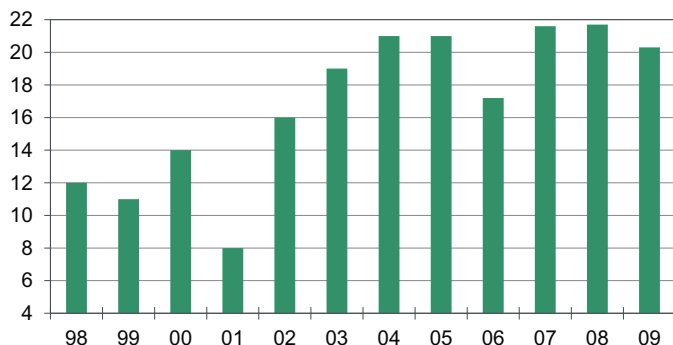
¹⁵ Muro, Mark and Sarah Rahman. Centers of Invention: Leveraging the Mountain West Innovation Complex for Energy System Transformation. The Brookings Institution. Brookings Mountain West. September 2010. Available at www.brookings.edu.

¹⁶ Energy Information Administration, State Energy Data System. U.S. Department of Energy.

¹⁷ Kenny, J.F., Barber, N.L., Hutson, S.S., Linsey, K.S., Lovelace, J.K., and Maupin, M.A. 2009. Estimated Use of Water in the United States in 2005: U.S. Geological Survey Circular 1344. p. 52

Chart 7: Recycling Becomes More Prevalent

Recycling rate, ex construction and demolition debris, %



Source: Nevada Division of Environmental Protection

As with water, Nevadans consume far less energy per unit of output than average for the U.S. Nevada's consumption equaled around 7,300 BTUs of energy per inflation-adjusted dollar of gross state product in 2008, on par with Arizona (see Chart 6). Among western states, only California boasted a greater rate of energy efficiency.

Similarly, Nevada shows greater energy efficiency on a per capita basis than the nation as a whole, although the state was less efficient than many of its neighbors in the

West in 2007. Nevadans consumed 304 million BTUs per capita that year; Oregon, Utah and Arizona each boasted a lower rate of per capita energy consumption.

Another key aspect of resource conservation involves finding suitable uses for waste. The proportion of municipal solid waste that is re-

cycled provides a measure of reuse trends in Nevada. The state's recycling rate increased from 19% in 2003 to 21.7% in 2008 (see Chart 7). The Nevada Division of Environmental Protection notes that the recycling rate reported for Clark County may be low relative to the actual amount of recycling that occurs in the region because of significant nonreporting by private recycling operations.¹⁸

¹⁸ Nevada Division of Environmental Protection. "2007 Recycling and Waste Reduction Report."

A Vision of a Sustainable Nevada

A National Leader

Nevada already possesses many of the assets it needs to become a national leader in resource conservation and energy generation.

Promoting investment in renewable energy will generate economic opportunities for Nevadans, as well as encouraging the diversification of the state's industrial structure. A clear benefit of power derived from renewable sources is its long-term sustainability.

But these new industries must be developed in conjunction with suitable water conservation practices. Thermoelectric energy generation can be highly water-intensive. Finding a suitable mix of new technologies and processes will prove essential to sustaining a high quality of life in the state.

GOAL	OBJECTIVE	METRIC	STRATEGIES
Become a national leader in resource conservation and renewable energy production.	1. Enhance Nevada's national leadership in resource conservation and technology.	Public water withdrawals per capita	<ul style="list-style-type: none"> » Coordinate water policy efforts at the state level » Adjust water rates to promote water conservation » Focus economic development on attracting less water-intensive industries » Promote water conservation technology for domestic use as well as for export
	2. Enhance Nevada's national leadership in renewable energy generation.	Market share of renewable energy generating capacity	<ul style="list-style-type: none"> » Facilitate access to federal land » Retrofit public facilities with energy-efficient technology » Develop energy resources and transmission grids for local use as well as for export
	3. Increase recycling to levels competitive with other western states.	Municipal solid waste recycling rate	<ul style="list-style-type: none"> » Promote the adoption of single-stream recycling and more frequent collections » Promote opportunities for vertical integration in waste reuse

GOAL 1

Become a national leader in resource conservation and renewable energy production.

OBJECTIVE #1

Enhance Nevada's national leadership in resource conservation and technology.

Receiving between seven and eight inches of rain annually, Nevada has little flexibility to expand its water supply, which is subject to highly variable flows from year to year. To meet future increases in demand, Nevada must expand its conservation and reuse efforts.

METRIC

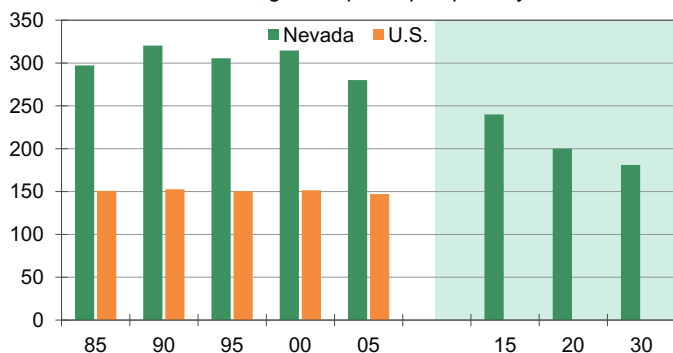
Public water withdrawals per capita.

A broad measure of municipal water conservation is the volume of gross water withdrawals per capita per day. This measure captures Nevada's overall progress toward the goal of improving water conservation, as it includes water consumed from public water-supply systems, which accounted for 28% of the total water consumed in Nevada during 2005. The metric, which includes only water made available through municipal water systems, may be influenced by water use for landscaping and by tourists.

Statewide water conservation efforts enacted over the last 20 years are largely responsible for the decline in per capita water consumption, but further increases in conservation will be necessary in the future. The Nevada Vision Stakeholder Group proposes the establishment of a statewide water use goal of 181 gallons per day per capita by 2030, equal to the weighted average of the 35% conservation goal outlined by Western Resource Advocates for the Southern Nevada Water Authority and the Truckee Meadows Water Authority.¹

Increase Water Use Efficiency

Public water withdrawals, gallons per capita per day



Sources: USGS, BEA, Moody's Analytics

STRATEGIES

Coordinate water policy efforts at the state level.

The state should coordinate plans with municipal water authorities, the two largest of which are the Southern Nevada Water Authority and Truckee Meadows Water Authority. The state should adopt the water conservation goals outlined above and advance water conservation toward achieving the goal in conjunction with local efforts. The state should also collaborate with localities on research.

Adjust water rates to promote conservation.

Tiered water rates rise as use increases to encourage conservation. Periodically re-examining and adjusting water rate tiers are strategies that have been used successfully in southern Nevada to increase water use efficiency during the past two decades.

Focus economic development on attracting less water-intensive industries.

Efforts should be increased to develop and recruit businesses in industries that use water less intensively. For example, Nevada has tried

to attract renewable energy companies whose technology is relatively low in water consumption. This strategy complements the expansion of renewable energy production, creating industries that build on Nevada's comparative advantages.

Promote water conservation technology for domestic use as well as for export.

Promoting new and innovative ways to conserve or reuse water will encourage the growth of export-oriented industries in addition to environmental sustainability. Nevada's scarce water supplies and rapidly growing population mean that the state will confront water supply problems ahead of most other regions. Investment in water infrastructure and technology could provide the state with a competitive edge in a growing field. Other regions are investing in water-related technology and innovation. In Wisconsin, the University of Wisconsin—Milwaukee is investing in a graduate school and business park. In addition, government subsidies in Singapore have enticed numerous engineering firms to locate in the country.

¹ Western Resource Advocates. A Sustainable Path: Meeting Nevada's Water and Energy Demands. 2008. Available online at www.westernresourceadvocates.org.

GOAL 1

Become a national leader in resource conservation and renewable energy production.

OBJECTIVE #2
Enhance Nevada's national leadership in renewable energy generation.

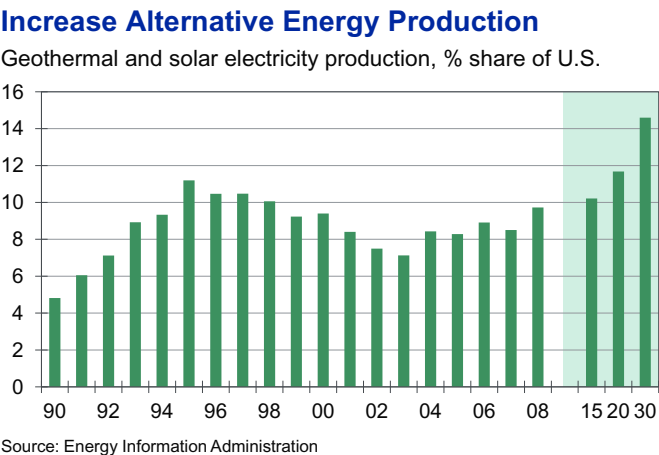
Nevada has considerable potential as a low-cost producer of solar, geothermal and wind energy. Low production costs and proximity to California, which boasts a rigorous renewable energy standard and rising demand for energy, position Nevada to develop a competitive renewable energy export industry. Greater reliance on renewables will also reduce carbon emissions in Nevada.

METRIC

Market share of total U.S. renewable energy generating capacity.

Using market share to gauge renewable energy generation, rather than the quantity produced, allows a comparison of investment in renewable resources that is less sensitive to macroeconomic conditions or changes in federal policies. Renewable energy generating capacity in Nevada is measured as a share of the national capacity.

Nevada is gradually adding renewable energy generation capacity, but despite having considerable potential, the state's market share of renewable power is rising very slowly. The Nevada Vision Stakeholder Group believes an aggressive strategy to promote renewable energy production could raise the state's share of solar, geothermal and wind energy production by 50% over the next 20 years.



STRATEGIES

Facilitate access to federal land.

Development of renewable energy infrastructure with a suitable transmission grid will almost certainly require the use of land managed by the federal government. To be competitive with neighboring states with more available private land, Nevada needs to coordinate closely with the Bureau of Land Management or other federal agencies to speed approvals. This need to coordinate with federal agencies is a frequent theme across the various quality of life goals of this report.

Retrofit public facilities with energy-efficient technology.

Nevada's state government should improve its own energy conservation efforts. This strategy is consistent with recommendation 27 of Nevada's Spending and Government Efficiency Commission, which held that the state should update, execute

and enforce its existing energy conservation plan.¹ Long-term strategies outlined in the state's energy plan include acquisition of energy-efficient materials, replacement of older or inefficient products, and training personnel in energy efficiency.²

Develop energy resources and transmission grids for local use as well as for export.

Nevada should explore development of decentralized energy generation models that would locate energy-generating equipment close to consumers to minimize transmission costs. Given the state's size and low population density, this strategy would complement larger-scale renewable energy generation facilities.

1 Nevada Spending and Government Efficiency Commission. "Final Report of the Nevada Spending and Government Efficiency Commission to Governor Jim Gibbons." Reno, January 7, 2010.
2 State of Nevada. Energy Conservation Plan for State Government. 2001.

GOAL 1

Become a national leader in resource conservation and renewable energy production.

OBJECTIVE #3
Increase recycling to levels competitive with other western states.

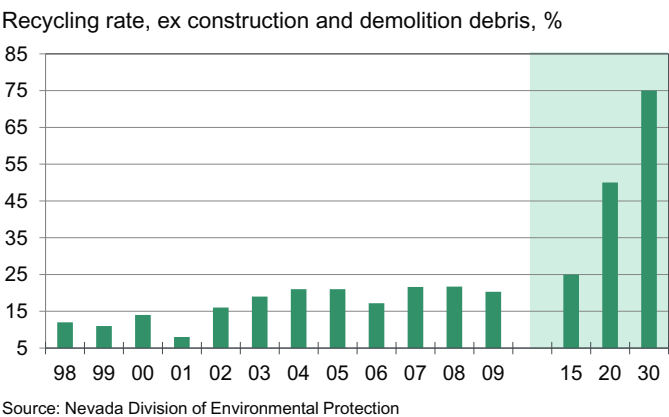
Minimizing waste generated in Nevada's cities will help safeguard Nevada's environment and preserve its natural beauty. Each year, a small fraction of the waste produced in Nevada is diverted from landfills to recycling centers. Recycling is generally an energy-intensive process, but it saves land and other resources. Recycling industries also create employment opportunities.

METRIC

Municipal solid waste recycling rate.

The recycling rate captures the proportion of municipal solid waste recycled and reused. In 1991, the Nevada legislature adopted a goal of a 25% recycling rate in communities of 100,000 or more. This goal has not yet been achieved. In 2007, Nevada's overall recycling rate stood at 21.6%. The 20-year goal is to raise Nevada's recycling rate to 75%, consistent with legislation introduced by Governor Jim Gibbons. A recycling rate of 75% would give Nevada among the highest recycling rate in the West.

Increase Nevada's Recycling Rate



STRATEGIES

Promote the adoption of single-stream recycling and more frequent collections.

Single-stream recycling allows paper, glass, plastic and metal to be commingled by consumers, making recycling more convenient to foster greater participation. The success of limited single-stream recycling projects in Nevada suggests this strategy can be broadened to increase resource conservation. The strategy may also lower the cost of collecting recyclables, although such savings must be weighed against new capital costs, including new collection vehicles and processing facilities.

Promote opportunities for vertical integration in waste reuse

Pollution-minimizing gasification systems represent one promising avenue for research, and other advanced methods of converting waste into energy are likely to become available over the long term horizon. In addition, investment in recycling centers to process waste that would otherwise be sent to a landfill promises to create local jobs while alleviating strain on the environment produced by waste accumulation.

Focus On | Transportation

Nevadans' collective choices regarding infrastructure play a critical role in shaping how the state grows, how its communities connect, where businesses choose to locate, and how the environment responds.

One major strength is that Nevada's transportation network is in better shape than those of many other states. Nevada's roads and bridges are structurally sound, and the state is home to one of the largest and most efficient passenger airports in the nation. Even among the relatively young western states, Nevada's transportation system stands out as one of the best maintained.

Yet measures of mobility and access show Nevada falling behind national and regional averages. Over the last several years, Nevada's largest urban area has grown into one of the nation's most congested.¹ Despite heightened interest in energy efficiency and environmental protection, Nevada's communities still rely more heavily than most on automobiles. The state also lacks important links to some of its largest neighbors.

Nevada now faces unique challenges to growth and the improvement of its living standards. The sizable role of transportation in advancing economic development and quality of life is a compelling reason for Nevadans to assess both the state's relative ranking and its progress toward an integrated and efficient system.

Targeted investments in infrastructure such as highways, airports, mass transit, and water and sewer systems stand to generate important long-term benefits for Nevada. Transportation infrastructure influences costs and productivity, health and safety, and environmental quality. Nevada's transportation policy initiatives are therefore critical to improving the state's overall quality of life.

Infrastructure and economic growth are inextricably linked. A larger stock of public capital is associated with higher output

and overall productivity, although the benefits created by additional investment vary substantially over time.² The mechanisms through which public capital influences output and productivity are fairly straightforward. Investments in transportation capital allow greater access, save time, and make private investment more efficient, leading to higher productivity. Better highway access can enable a business to distribute products to a larger customer base and to hire from a larger pool of labor, reducing the gap between the supply of skilled workers and available jobs.³

One measure of Nevada's transportation efficiency is the ratio of vehicle miles per inflation-adjusted dollar of gross annual output. The more efficient the system, the lower the ratio. Nevada has seen rapid improvement in this metric in recent years: The number of vehicle miles traveled per thousand dollars of real gross product fell from 239 in 2000 to 201 in 2008. The transportation efficiency of the whole U.S. economy has improved, but not as fast as Nevada's. The shift may be partly structural, as information technology and a shift away from manufacturing made it possible to increase output with less travel.

The effectiveness of Nevada's transportation investments can be seen in the growth of competitive export-oriented industries in the state. The benefits of good highways vary across industries; those that gain the most include agriculture,

food-related activities, transportation, trade and construction.⁴ Nevada's location along a major trade route between Canada and Mexico has helped the region develop export-oriented transportation and warehousing industries, although delays and bottlenecks are frequent along I-15 through Las Vegas. The share of employment in transportation and warehousing stood at 4% across Nevada during 2009, compared with 3.2% nationwide.⁵ This is an appropriate measure of the business community's response to additional investment in major highway expansion and maintenance.

Highways can also allow a business to reach suppliers faster and at a lower cost. Shorter delivery times can minimize the need to carry inventory.⁶ Conversely, if a poorly maintained road surface lowers average speeds or decreases the volume of traffic, it may negate some of the improvement in productivity that a road provides.

Nevada maintains a high-quality network of roads and bridges, and the state is served by one of the nation's largest airports. One measure of road quality is the proportion of Nevada's highways and major arteries rated "good" or "very good" in terms of pavement smoothness. Road roughness is closely associated with safety, comfort and travel time.⁷ These rating sys-

1 Schrank, D. and Lomax, T. The 2009 Urban Mobility Report. Texas Transportation Institute, <http://mobility.tamu.edu/ums/>.

2 Munnell, Alicia H., ed., with the assistance of Leah M. Cook. "How Does Public Infrastructure Affect Regional Economic Performance?" Is There a Shortfall in Public Capital Investment? Federal Reserve Bank of Boston Conference Series 34. 1991. For a broad overview of associated literature, see also: Baird, Brian A. Public Infrastructure and Economic Productivity: A Transportation-Focused Review. Transportation Research Record no. 1932. 54-60. 2005.

3 Weisbrod, Glen, and Arlee Reno. "Economic Impact of Public Transportation Investment" prepared for the American Public Transportation Association, TCRP Project J-11(7). October 2009.

4 Nadiri, Ishaq M. and Theofanis P. Mamuneas. "Contribution of Highway Capital to Industry and National Productivity Growth." Federal Highway Administration. Office of Policy Development, Washington DC. 1996.

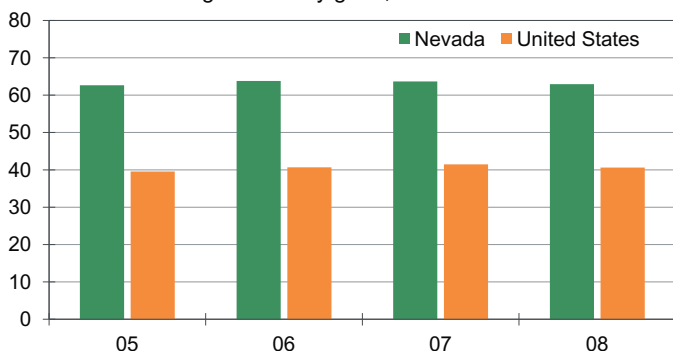
5 U.S. Bureau of Labor Statistics. "Regional and State Employment and Unemployment (Monthly)." Economic news release, August 20, 2010. <http://www.bls.gov/news.release/laus.toc.htm>.

6 Nadiri, Ishaq M. and Theofanis P. Mamuneas. "Contribution of Highway Capital to Industry and National Productivity Growth." Federal Highway Administration. Office of Policy Development, Washington DC. 1996.

7 Sayers, Michael W. and Steven M. Karamihas. "The Little Book of Profiling: Basic Information about Measuring and Interpreting Road Profiles." University of Michigan Transportation Research Institute. 1998.

Chart 1: Nevada Boasts High-Quality Roadways

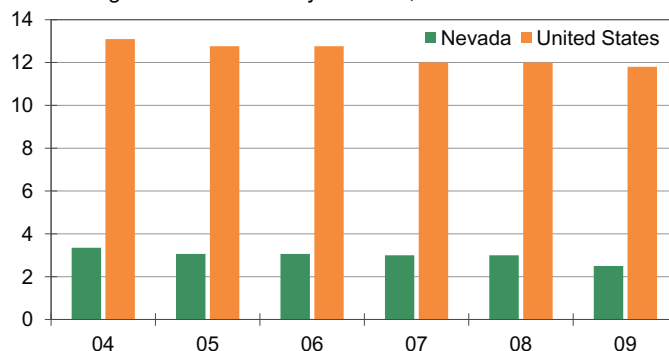
Miles of road rated good or very good, %



Source: Bureau of Transportation Statistics, Federal Highway Administration

Chart 2: Nevada's Bridges Have Fewer Faults...

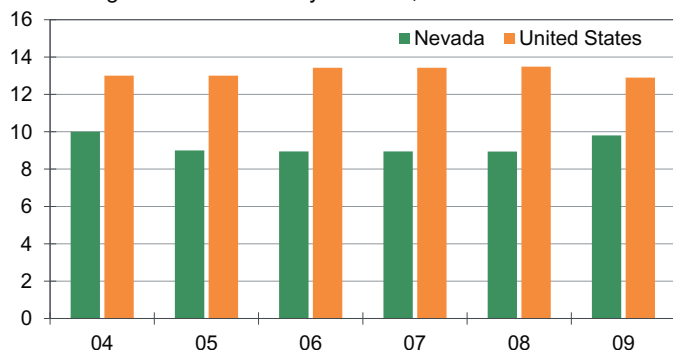
Road bridges rated structurally deficient, %



Source: Bureau of Transportation Statistics, Federal Highway Administration

Chart 3: ...And Very Modern Structures

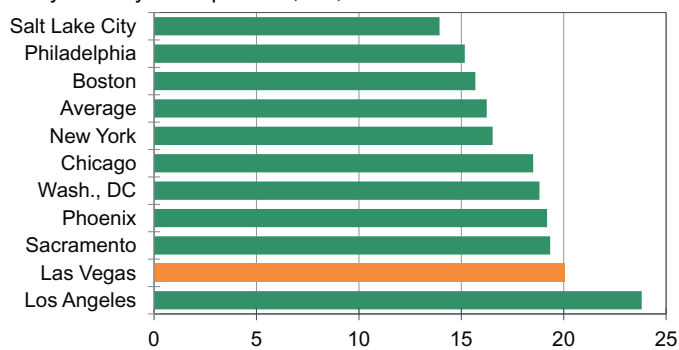
Road bridges rated functionally obsolete, %



Source: Bureau of Transportation Statistics, Federal Highway Administration

Chart 4: Las Vegas Among the Most Congested

Daily freeway miles per lane, ths, 2007



Source: Texas Transportation Institute

tems allow for comparison among regions and over time.

Among western states, which generally boast above-average road quality, Nevada ranks highly in its share of roads rated "good" or "very good." In 2008, the proportion of highways and arteries rated at least good in Nevada stood at nearly 63%, higher than the national average of about 40% (see Chart 1). Even so, Nevada's roads, like those across the nation, have deteriorated over the last several years. In 2003, for example, nearly 67% of Nevada's roadways were rated at least good. Only Georgia, Florida, Montana, and Tennessee reported better overall pavement conditions.

Another measure of transportation infrastructure quality is the condition of a region's bridges. Most bridges receive regular inspection⁸

for deficiencies that could restrict performance or require repair or replacement (see Chart 2).

The proportion of Nevada's bridges found structurally deficient to the point of reduced load-carrying capacity stood at just 2.5% in 2009, the lowest share of any state.⁹ The proportion of the state's bridges classified as functionally obsolete—indicating they no longer meet current design standards and may require improvement—was higher at 9.8% but still below the national average rate for obsolescence (see Chart 3).

Beyond purely economic effects, public infrastructure has a large bearing upon a community's quality of life. Access to employment opportunities, amenities such as parks and recreational areas, and

goods and services produced elsewhere can define a region for both existing and prospective residents.¹⁰

Nevada depends heavily on automobile travel and lags other regions in offering alternative modes of transportation. Moreover, the costs of auto dependence are increasing. Traffic congestion in Las Vegas is a significant challenge to the growth of southern Nevada, while many of the state's other communities offer few travel options other than automobiles.

Congestion in the Las Vegas metropolitan area is increasing rapidly. This can be measured a number of ways, such as the ratio of total usage to total capacity or by analyzing the costs of congestion. An example of the former is the number of vehicle miles traveled per freeway lane mile. This metric provides information about the demand for

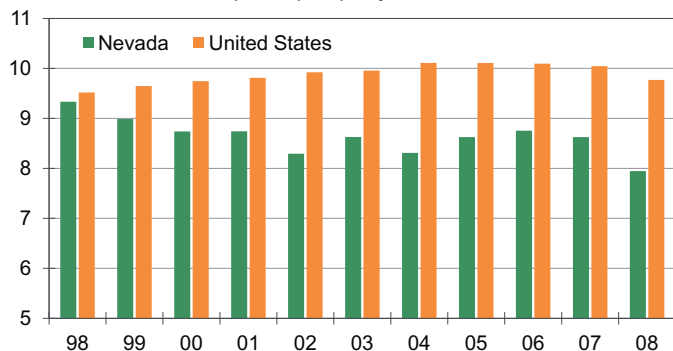
⁸ Federal Highway Administration. "2006 Status of the Nation's Bridges, Highways, and Transit: Conditions & Performance." U.S. Department of Transportation. 2007.

⁹ U.S. Bureau of Transportation Statistics. "State Transportation Statistics 2009." Research and Innovative Technology Administration. U.S. Department of Transportation. Available at www.bts.gov/.

¹⁰ Aschauer, David A. and Alicia H. Munnell, ed. Why is Infrastructure Important. In *Is There a Shortfall in Public Capital Investment?* Federal Reserve Bank of Boston. 21-48. 1990.

Chart 5: Average Nevadan Drives Fewer Miles

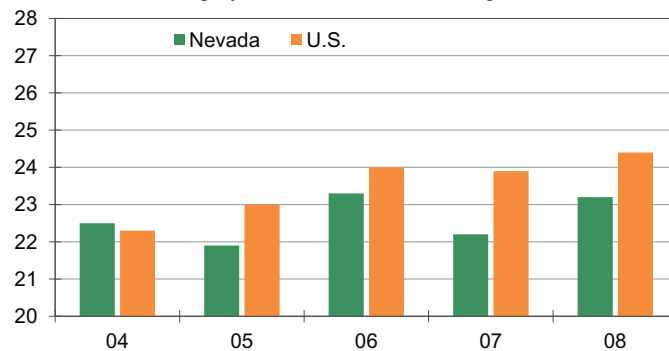
Vehicle miles traveled per capita per year, ths



Source: Census Bureau, Bureau of Transportation Statistics

Chart 6: Alternative Transportation Is Used Less

Workers commuting by means other than driving alone, %



Source: Census Bureau: American Community Survey

travel relative to the supply of road space; an increasing number represents disproportionate growth in usage relative to capacity.

According to the Texas Transportation Institute, the number of vehicle miles traveled daily on Las Vegas' freeways rose 7.5% between 2006 and 2007 to 11.51 million, while the number of available lane miles of freeway was unchanged at 575. As a result, Las Vegas' ratio of miles of vehicle travel per lane mile climbed to 20,000 in 2007, up from 18,600 in 2006.¹¹ Measured this way, Las Vegas ranked second, after Los Angeles, in congestion among cities in the West (see Chart 4).

Outside Las Vegas, average miles of vehicle travel per capita appear relatively stable, but this has not prevented a sharp rise in the number of vehicle miles of travel per year. Save for a sharp drop in the recession in 2008, the average Nevadan has consistently driven around 8,700 miles per year for a decade (see Chart 5). Nevada commuters generally travel fewer miles per year than do drivers in other regions of the country, but even this lower level, when combined with rapid population growth, produces a faster increase than average in total vehicle miles. Total annual vehicle miles traveled rose 144% from 1990 to 2007¹², compared with an increase of 40% nationwide.

With more cars competing for the same road space, the average commute time has increased rapidly, as have the costs associated with congestion delays. Such costs are another important measure of a region's quality of life. According to the Texas Transportation Institute, the average number of hours per year spent delayed in traffic by a traveler in Las Vegas during peak commute periods rose from 36 to 44 between 2002 and 2007.¹³ By comparison, the average for all urban communities in the U.S. was just 36 hours; for urban areas similar in size to Las Vegas, the average was 35.

Transportation infrastructure also significantly affects the environment. Some transportation modes are more environmentally friendly than others. Mass transit systems may help reduce carbon emissions and other forms of air pollution if commuters are induced to replace automobile travel.

Travel within Nevada's largest urban areas is still highly dependent upon automobiles, and few alternatives exist for commuters. In 2008, nearly 77% of Nevadans traveled alone to work in a car, truck or van.¹⁴ This was slightly above the national average of 76%, while most other western states reported rates of solo automobile commuting at or below the national average. Nevadans use car-

pools slightly more than average, with 12.1% of commuters participating in such arrangements, compared with a national figure of about 11%. Fewer Nevadans use public transportation, walk, or ride a bicycle to commute to work than the U.S. average (see Chart 6).

Within Las Vegas, however, public transit is used extensively despite the area's lack of passenger rail service, an alternative found in many other urban areas. One measure of public transit use in an urban setting is the number of public transit trips made per year per capita. During 2008, the number of unlinked passenger trips per capita in Las Vegas ranked 14th highest among the nation's largest urban areas (see Chart 7). Bus travel was the dominant mode of transportation, accounting for 86% of all trips.

Set against the background of Nevada's population explosion over the last several decades, the transportation system within much of the state appears to have largely kept up with demand. Links with other states in the region, however, appear underdeveloped. Expanded trade among the U.S., Canada and Mexico has led to a sharp increase in the volume of traffic through Nevada. One response to this shift could be the expansion of the interstate highway system from Canada to Mexico, including a direct link between Las Vegas and Phoenix.¹⁵

11 Schrank, D. and Lomax, T. The 2009 Urban Mobility Report. Texas Transportation Institute. <http://mobility.tamu.edu/ums/>.

12 "State of Nevada Transportation Facts and Figures." Operations Analysis Division, Nevada Department of Transportation. 2009.

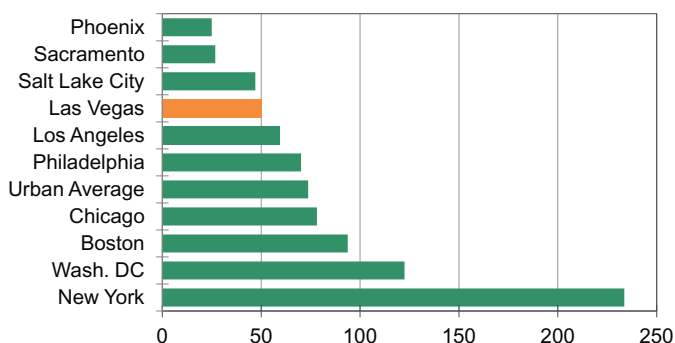
13 "Urban Mobility Report 2009." University Transportation Center for Mobility, Texas Transportation Institute. 2009. Available online at <http://tti.tamu.edu>.

14 U.S. Bureau of Transportation Statistics. "State Transportation Statistics 2009." Research and Innovative Technology Administration. U.S. Department of Transportation. Available at www.bts.gov/.

15 Lang, Robert E., Mark Muro, and Andrea Sarzynski. "Mountain Megs: America's Newest Metropolitan Places and a Federal Partnership to Help Them Prosper." The Brookings Institution. Blueprint for American Prosperity. 2008. Cox, Wendell and Jean Love. "Interstate 2000: Improvement for the Next Millennium." Roads and Bridges. June 1997.

Chart 7: Public Transit Widely Used in Las Vegas

Public transit passenger trips per capita, 2008



Source: Bureau of Transportation Statistics

Nevada boasts a strong air transportation system, but adding capacity to meet increased demand will be a long-term challenge. McCarran Airport in 2009 boasted a greater overall on-time arrival percentage than many other large passenger airports, ranking fifth-highest among the nation's 50 largest airports.¹⁶ However, existing runway capacity may not ac-

¹⁶ Bureau of Transportation Statistics. "State Transportation Statistics." Research and Innovative Technology Administration. U.S. Department of Transportation. 2009.

commodate future growth in business travel and tourism. As airport traffic grows and bottlenecks increase, Nevada's performance edge may erode. Securing the funds necessary to maintain Nevada's existing infrastructure and invest in new systems will be an important part of the state's long-range transportation plan. The largest portion of funding for Nevada's Department of Transportation comes from federal and state highway user fees, which depend upon fuel taxes, vehicle registration and permit fees, and the government services tax.¹⁷ The reliance upon revenue from gasoline consumption may mean funds will fail to keep pace with required

¹⁷ Rawlings, Scott. "Transportation In Nevada: Vision and Strategies." Nevada Department of Transportation. 2010.

investment in new forms of transportation, particularly if alternative modes of travel reduce fuel usage, for example. Over the long term, dependence upon the gasoline tax could lead to a shortfall in state and local government revenues.

A Vision of a Connected Nevada

Promoting Connectivity

The Nevada Vision Stakeholder Group's long-term goals include the improved movement of goods and people across the state as well as stronger connections to other parts of the Intermountain West. Nevada can take advantage of its position near growth markets on the West Coast to support development of transportation and logistics industries. A well-maintained road system that provides access to Nevada's largest neighbors will accelerate development of these industries.

Connecting communities within Nevada will also promote equity, providing better access throughout the state.

GOAL	OBJECTIVE	METRIC	STRATEGIES
Enhance the movement of goods and people throughout Nevada; strengthen Nevada's connection to communities across the Intermountain West	1. Maintain Nevada's lead over the nation in terms of the quality of its infrastructure.	Roadway and bridge condition indices	<ul style="list-style-type: none"> » Maintain existing infrastructure in good condition » Invest in transportation infrastructure throughout Nevada » Investigate innovative ways of financing infrastructure » Investigate alternatives to the fuel tax
	2. Diversify the state's transportation network to encourage sustainability.	Commuters using alternatives to driving	<ul style="list-style-type: none"> » Develop alternative forms of transportation
	3. Strengthen Nevada's connection to communities throughout the Intermountain West.	Interstate highway center-line miles per mil residents.	<ul style="list-style-type: none"> » Improve highway links between southern Nevada and Arizona » Pursue development of a high-speed rail with a federal subsidy » Coordinate infrastructure development through regional planning organizations » Develop policies to support alternative-fuel vehicles » Orient transportation systems toward the development of inland ports

GOAL 1

Enhance the movement of goods and people throughout Nevada and strengthen the state's connection to communities across the Intermountain West.

OBJECTIVE #1

Maintain Nevada's lead over the nation in the quality of its infrastructure.

Nevada must strive for balance between investing in new roadways and providing upkeep for its existing structures. Nevada's first-rate roads and bridges are essential to sustaining a high level of mobility and enhancing trade connections. Well-maintained roadways are associated with improved driver comfort, time savings, greater fuel efficiency, and lower vehicle maintenance costs.

METRIC

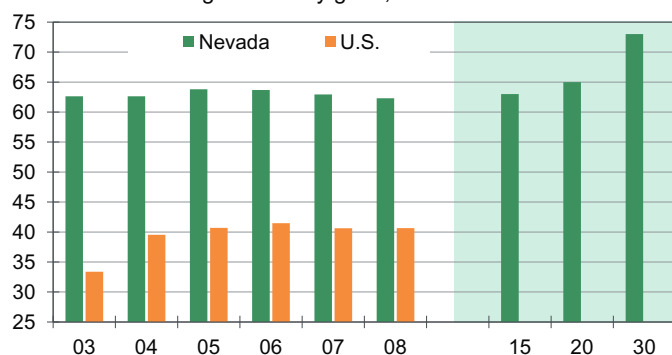
Roadway and bridge condition indices.

Reported annually by the Bureau of Transportation Statistics, the road and bridge condition indices assess the health of Nevada's surface transportation infrastructure relative to that of other states. This indicator responds to the state's resurfacing and reconstruction activities. Road conditions are measured according to the international roughness index, a measure of pavement smoothness. Bridges are rated based on how much their flaws reduce load-bearing capacity.

The five-year benchmark calls for Nevada to remain above its 2008 level. Nevada's 10-year goal is to increase its share of roads rated at least "good" to 65%, which would put it second among the states by 2008 values. Over the next 20 years, Nevada's goal should be to maintain the highest-quality roads in the country, which, based on 2008 data, would be consistent with a percentage of at least 73% rated at least "good."

Maintain Nevada's High-Quality Roads

Miles of road rated good or very good, %



Source: Bureau of Transportation Statistics

STRATEGIES

Maintain existing infrastructure in good condition.

Nevada's arid climate helps preserve its infrastructure, but most of its roads and bridges are relatively young and will require increased maintenance over time. This is essential to developing Nevada's trade connections, as smooth roads form a comparative advantage for the development of trucking and warehousing.

Prioritizing existing infrastructure ahead of investment in new projects is consistent with the policy recommendations outlined by the Blue Ribbon Task Force to Evaluate Nevada Department of Transportation Long-Range Projects.¹

Over the next decade, about one-fifth of the state's bridges will reach 50 years of age, considered a normal usable life

span.² Nevada's bridges will thus require more repair or reconstruction over the next two decades, and the state may find itself losing its lead if infrastructure repair is neglected.

Invest in transportation infrastructure throughout Nevada.

Investing in additional road infrastructure is a strategy to help alleviate congestion in the Las Vegas and Reno-Sparks metropolitan areas. Connectivity is a greater concern in rural communities, and investment in new roadways will be necessary to provide a consistent level of access to expanding towns.

Investigate innovative ways of financing infrastructure.

Innovative borrowing arrangements may allow Nevada to accelerate certain types of in-

¹ State of Nevada. Blue Ribbon Task Force to Evaluate Nevada Department of Transportation Long-Range Projects, 2008-2015. Roads to the Future Task Force. 2006. Available at www.nevadadot.com.

² Nevada Department of Transportation. "State Highway Preservation Report." Carson City, February 2009. Available at www.nevadadot.com.

STRATEGIES

infrastructure projects. When funds are needed for large projects, the state may consider the use of Grant Anticipation Revenue Vehicles. Interest and issuance costs related to the use of GARVEE bonds may be eligible for federal reimbursement. Nevada may also consider a state infrastructure bank, a revolving investment fund for transportation projects. A broad array of innovative financing options are available and should be considered for funding future projects.

Investigate alternatives to the fuel tax.

Nevada's fuel tax constitutes an important source of funding for state highway construction and maintenance, but it may not be a stable source of revenue over the long term. Revenue from the fuel tax is particularly sensitive to changes in demand

for gasoline, and the price of crude oil can create volatility for this revenue stream. Revenues may decline as commuters shift toward more fuel-efficient or fully electric vehicles.

Research on alternative sources of revenue should continue. One alternative revenue structure would involve assessing a fee based upon miles driven in lieu of a tax on fuel. This concept has been extensively studied in other states.³ Another study underway in Oregon also takes into account vehicle weight. Such alternatives have the potential to produce more stable revenue while better managing congestion by creating incentives to travel during off-peak hours.

³ Oregon Department of Transportation. "Oregon's Mileage Fee Concept and Road User Fee Pilot Program: Final Report." Salem, November 2007. Available at www.oregon.gov.

GOAL 1

Enhance the movement of goods and people throughout Nevada and strengthen the state's connection to communities across the Intermountain West.

OBJECTIVE #2
Diversify the state's transportation network to encourage sustainability.

Limited available land and water, the cost of infrastructure, and longer travel times constrain the outward growth of Nevada's communities. Urban land use patterns in Nevada are in many ways more efficient than elsewhere in the West, yet they still depend on travel by automobile. To sustain long-term population growth and environmental quality, Nevada's cities must provide better ways to link residents, businesses and community facilities.

METRIC

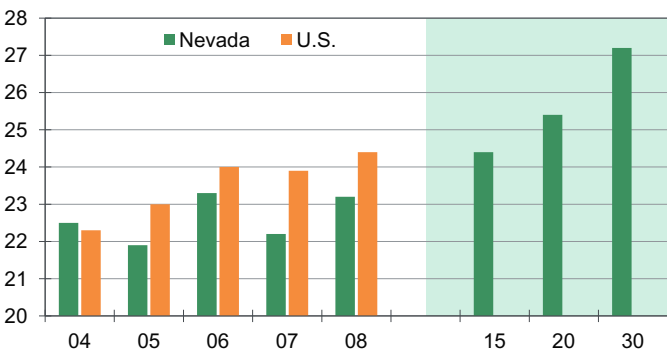
Commuters using alternatives to driving.

The share of commuters who find alternatives to driving highlights the travel choices available. In 2008, 76.8% of Nevadans traveled alone in an automobile as their primary means of getting to work. Just 8.1% of Nevada workers took public transportation or taxis, bicycled, or walked as their primary means of commuting, compared with 9.6% nationwide. The remaining 15.1% worked at home, carpooled, or rode with family members or friends.

The five-year goal is to increase Nevada's share of commuters not driving alone to 24.4%, which was the national average share during 2008. A reasonable 10-year goal is to raise the share of commuters using alternative modes of transportation to the regional average; during 2008, this was 25.4%. The 20-year goal is to match or exceed the share of alternative commuters in Montana, the current leader in the Mountain West. In 2008, Montana's alternative commuter share was approximately 27.2%.

Increase Alternative Transportation Usage

Workers commuting to work by means other than driving alone, %



Sources: Census Bureau: American Community Survey

STRATEGY

Develop alternative forms of transportation.

Policies should encourage greater use of pooled transportation, urban transit, walking and bicycling. Nevada may require additional investment in infrastructure or rights-of-way to encourage alternative modes of transit. The return on such investment will be highest in regions now suffering from congestion.

A light rail service could connect communities to businesses and recreational areas such as parks. The Las Vegas Valley lacks such a service, in contrast with a

number of other similarly sized metropolitan areas in the West. The Las Vegas bus rapid transit system could complement the development of a regional light rail network.

A complementary strategy would incorporate bicycling plans into new construction or rehabilitation projects involving state roads.¹ Bicycle-friendly improvements might include wider road shoulders or dedicated bicycling lanes.

¹ Nevada Bicycle Advisory Board. "Nevada Bicycle Transportation Plan." January 2003. Available at www.bicyclenevada.com.

GOAL 1

Enhance the movement of goods and people throughout Nevada and strengthen the state's connection to communities across the Intermountain West.

OBJECTIVE #3

Strengthen Nevada's connection to communities throughout the Intermountain West.

Nevada boasts a high-quality road network, but transport links to neighboring communities such as Phoenix and southern California need to be improved. Linking Nevada with other regions in the West will generate trade and transportation synergies as goods and people move more freely.

METRIC

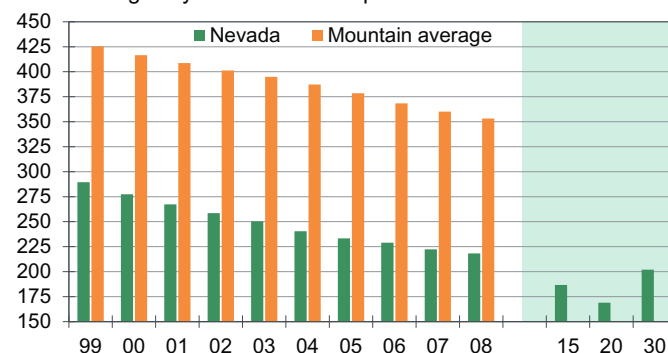
Interstate centerline miles per million residents.

The amount of interstate highway per permanent resident measures Nevada's relative connectedness compared with other Mountain West states. The metric will rise as new roads are added, although it will not reflect the addition of lanes to an existing roadway.

Population everywhere has been growing faster than the interstate highway system, which has caused this ratio to decline over time. This has been particularly true for Nevada. The state's long-term goal involves increasing the size of its interstate highway system through connections to Phoenix and between Las Vegas and Reno. Efforts to improve existing roads to freeway standards in northern Nevada will increase connectivity over the next several years. However, a suitable 10-year goal involves the creation of Interstate 11, which will add 31 miles of interstate highway in Nevada.¹ Over the 20-year horizon, the goal is to extend the proposed interstate between Las Vegas and Reno, which would contribute an estimated 375 centerline miles to the interstate network. A new highway would be constructed and portions of the existing highway (US-95) between Las Vegas and Reno would be reclassified once they are expanded by including additional lanes and resurfacing.

Increase Connectivity With Mountain West

Interstate highway centerline miles per mil residents



Sources: Census Bureau, Bureau of Transportation Statistics

STRATEGIES

Improve highway links between southern Nevada and Arizona.

The upgrade of U.S. Highway 93 to freeway standards and its inclusion in the interstate system as Interstate 11 would complete an improved link to Phoenix. The future I-11 would also form a part of the proposed CANAMEX corridor, ultimately linking Mexico, the U.S. and Canada through the Intermountain West.

Pursue development of a high-speed rail with a federal subsidy.

A high-speed rail service would dramatically shorten travel times between Las Vegas and southern California, offering a viable alternative to short-haul flights between the two regions. This strategy would complement diversification efforts and allow existing capacity at McCarran International Airport to be reallocated toward long-haul flights.

¹ Hazlett, Bob. "Interstate 11 Update." Transportation Policy Committee. Maricopa Association of Governments. April 2010.

STRATEGIES (Continued)

A longer-term expansion of the western rail corridor would involve creating routes between other large urban areas, including Las Vegas, Phoenix, Salt Lake City, and Reno.

The state should seek to capture more federal matching funds and grants. Funding from the federal government for a future high-speed rail will depend heavily upon the completion of early feasibility studies, budgets, and project schedules. As is evident from the overwhelming number of applications received in the most recent round of federal grants, many states are competing for limited federal funding. Funds made available through the American Recovery and Reinvestment Act of 2009 targeted individual projects for which preliminary impact and design work had been completed.¹

Another strategy for financing a high-speed rail would involve a loan from the Federal Railroad Authority. Government credit assistance can help in overcoming short-term financing hurdles for projects in which the initial stream of fare revenue may be volatile or uncertain.²

Coordinate infrastructure development through regional planning organizations.

Regional planning organizations can help develop highways and rails across political boundaries. Planning at this level also enables projects to serve broad areas with future expansion in mind.

Develop policies to support alternative-fuel vehicles.

Increased use of alternative-fuel vehicles such as fully electric cars will require investment in charging stations. The shift toward these types of vehicles is expected to accelerate as neighboring states, particularly California, move toward mandating greater fuel efficiency or imposing tougher standards on fossil-fuel vehicles.

Orient transportation systems toward the development of inland ports.

Promoting the development of an inland port is consistent with several other strategies outlined in this section. An inland port located in southern Nevada would help move goods throughout the rapidly growing Intermountain West. Such a port would benefit from cargo shipped by highway or rail from Arizona and California, and it could tie into the planned Ivanpah Valley airport.³

³ This strategy is consistent with a recommendation from the Legislative Commission's Subcommittee to Study the Development and Promotion of Logistics and Distribution Centers and Issues Concerning Infrastructure and Transportation to draft a letter urging support for allocation of funds for the development of road and rail infrastructure into the Ivanpah area. See Summary of Recommendations, Assembly Concurrent Resolution No. 30. Available at www.leg.state.nv.us.

¹ Federal Railroad Administration. "High-Speed Intercity Passenger Rail ("HSIPR") Program, Notice." Federal Railroad Administration. Department of Transportation. Federal Register, Vol. 74, No. 119. June 23, 2009.

² Federal Railroad Administration. Supplemental Draft Environmental Impact Statement and 4(f) Evaluation for the proposed DesertXpress High-Speed Passenger Train. U.S. Department of Transportation. Available at www.fra.dot.gov/pages/1703.shtml.

Focus On | Education

A well-educated population and workforce are arguably the most important determinants of a state's economic prospects and quality of life. Education promotes individual, community and economic development; an educated workforce helps local businesses expand, promotes entrepreneurship, and attracts new business investment. Educational attainment is also correlated with greater earnings potential, lower rates of joblessness, and a healthier population.

The Nevada Vision Stakeholder Group believes Nevada's low ranking among states on a number of educational metrics should be addressed, or the state's quality of life could deteriorate rather than improve over the long term.

Nevada faces a number of challenges to raising the educational attainment of its residents. Some of this can be traced to the state's industrial structure and some to socioeconomic and demographic conditions in the state. Nevada's population mix includes ethnic groups that have historically pursued higher education at lower than average rates, an extension of their higher likelihood to drop out of high school.

A higher average level of educational attainment stands to benefit Nevada in many ways. Individuals will see their earnings potential enhanced;¹ even a high school diploma can significantly increase lifetime earnings (see Chart 1). In 2007, the mean income for Americans with high school degrees was nearly 50% higher than the earnings of

those without one, and that gap has widened over time. An associate's degree also has significant value, raising average earnings about 25% above the incomes of those with only a high school diploma. Bachelor's degree holders had mean earnings nearly double the level of those lacking high school diplomas. Raising high school graduation rates and investing in higher education from community colleges to universities can bring significant rewards for individuals and the community as a whole.

Higher educational attainment also expands employment opportunities. Jobless rates decline steadily as levels of educational attainment rise (see Chart 2).² The unemployment rate for college graduates is generally around a third of the rate for those who have not completed high school. College-educated individuals have the highest labor force participation rate of any group. Conversely, those without high school diplomas or the equivalent are overrepresented among the unemployed, making up more than 11% of the jobless but only around 7% of all workers.

Job opportunities will be concentrated in careers that require education beyond high school. According to the Bureau of Labor Statistics, from 2008 to 2018, the fastest job growth will occur in occupations requiring an associate's degree, followed by those requiring a master's degree.³

In the coming years, the industrial structure of Nevada will change. Indeed, a more diverse economy is among the goals addressed in this report. A shifting industrial structure will require an educated workforce. This is evident from U.S. data that show, on average, fewer than 20% of workers in the leisure and hospitality industries have bachelor's degrees (see Chart 3). Among workers in public administration, financial services, professional and business services, and health and education services, however, 40% have at least bachelor's degrees. Higher education is therefore critical to a more diverse economy. This does not solely mean increasing the number of bachelor's or graduate degrees; expanded opportunities

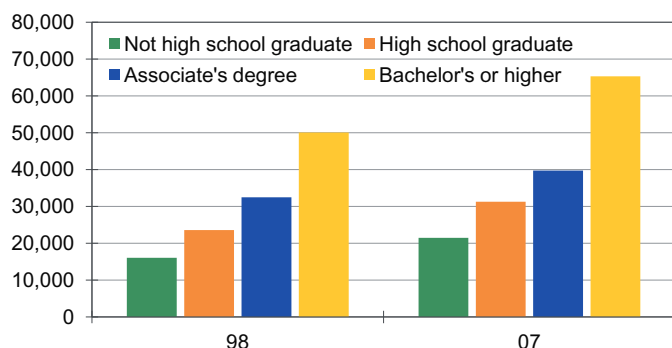
1 U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements (March).

2 Bureau of Labor Statistics, Current Population Survey.

3 U.S. Bureau of Labor Statistics. "Employment Projections—2008-2018" press release. Updated December 11, 2009. <http://www.bls.gov/news.release/pdf/ecopro.pdf>.

Chart 1: Earnings Boost From Education

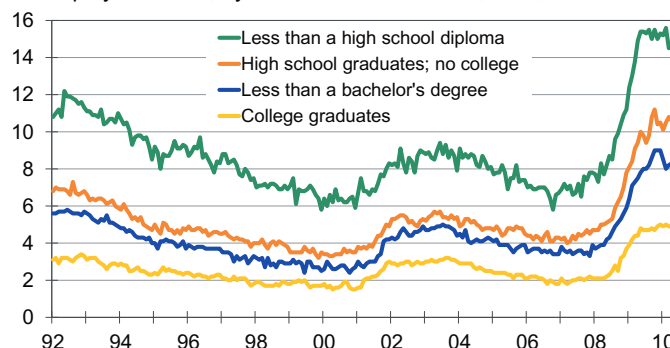
Mean earnings by educational attainment, U.S., \$



Source: Census Bureau

Chart 2: Education Helps Job Search

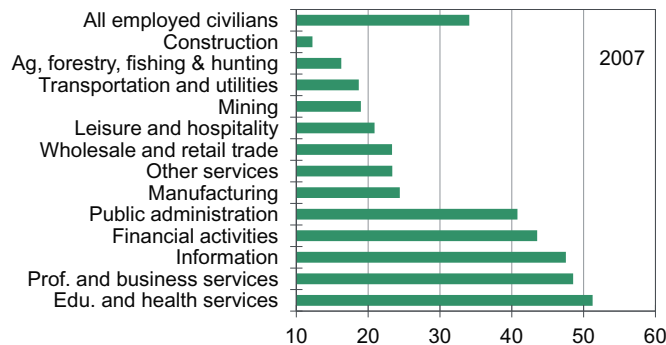
Unemployment rate, by educational attainment, U.S., %



Source: BLS

Chart 3: Educational Attainment by Industry

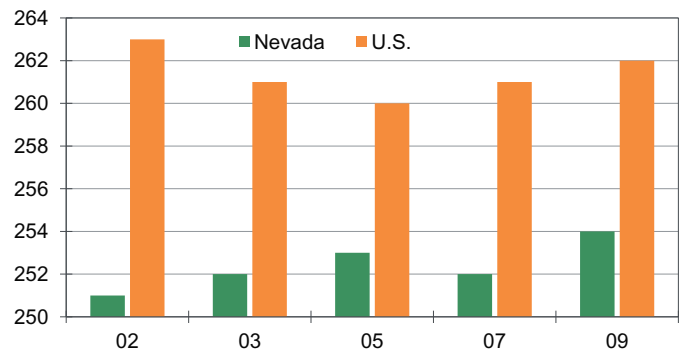
U.S. workers 25 or older with at least a bachelor's degree, %



Source: U.S. Census Current Population Survey

Chart 4: Students Struggle to Keep Up

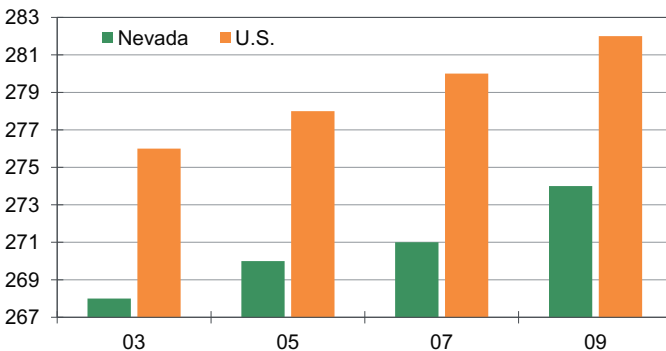
NAEP eighth grade reading score



Source: U.S. Department of Education

Chart 5: Gap Present Across Subject Areas

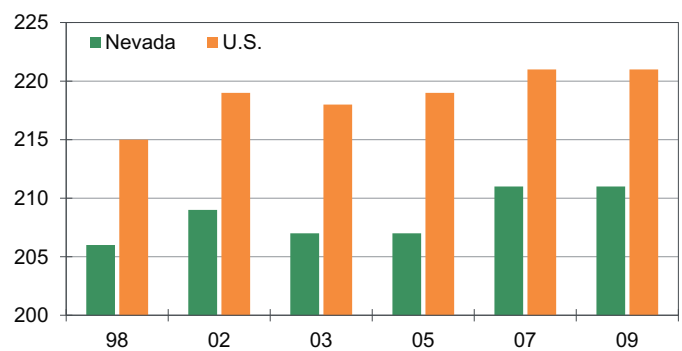
NAEP eighth grade math score



Source: U.S. Department of Education

Chart 6: Younger Students Also Fare Poorly

NAEP fourth grade reading score



Source: U.S. Department of Education

to earn associate's degrees at community colleges can go a long way toward boosting the quality of Nevada's workforce.

Education also correlates positively with physical and emotional health.⁴ Those with higher levels of schooling experience less depression, anxiety, and other forms of emotional distress and also report fewer physical aches and pains; greater emotional and physical well-being in turn accompanies gainful employment.

On a collective level, higher overall educational attainment enhances a community's economic growth potential by attracting higher value-added businesses. Rising labor force quality promotes business development and encourages firms to locate in the community, creating a self-reinforcing positive cycle. Business expansion attracts new

residents, creating demand for local services and expanding the labor pool, which in turn creates more employment opportunities.

Taking a long-term view, a quality education must start early in childhood. Enrollment in early-childhood educational programs improves performance in elementary school.⁵ Yet, in Nevada, only slightly more than 25% of children aged three or four are in school, compared with nearly half of all three- and four-year-olds in the U.S. The Head Start program, which is active in Nevada, has had positive short- and medium-term results, particularly with children from lower-income households.⁶

Other measures also show Nevada struggling to keep up. For example, state spend-

ing per pupil of \$7,806 in 2006-2007⁷ was well below the U.S. average of \$9,683, even though Nevada's spending had risen in each of the previous five years. Nevada's public school pupil-to-teacher ratio⁸ was 18.3, above the national average of 15.5. The National Assessment of Educational Performance reports Nevada's fourth and eighth graders performed well below the national average (see Charts 4, 5, 6 and 7). The fourth grade gap is smaller, but the Nevada Vision Stakeholder Group believes bringing student performance up by the fourth grade is critical for longer-term educational success. The state should be sure to include English Language Learner programs, as its growing share of Hispanic students means these programs will be an integral part of the educational process.

4 Ross, Catherine E. "Education and the Subjective Quality of Life." *Journal of Health and Social Behavior*. Vol. 38, September 1997. pp. 275-297.

5 Belfield, Clive R. "Investing in Early Childhood Education in Ohio: An Economic Appraisal." Cleveland Federal Reserve, Conference on Education and Economic Development. 2004.

6 Currie, Janet. "Early Childhood Education Programs." *Journal of Economic Perspectives*, Vol. 15 No. 2. pp. 213-238. 2001.

7 U.S. Department of Education, Institute of Education Sciences. "Digest of Education Statistics: 2009." <http://nces.ed.gov/programs/digest/d09/>.

8 *ibid*

Nevada's educational system also needs to find ways to keep older students from dropping out before they complete high school. According to the U.S. Department of Education⁹, the average freshman graduation rate at public secondary schools in Nevada was 52% for the 2006-2007 school year, compared with a national average closer to 74%. Students are more likely to drop out when they are not fully engaged in their education, possibly because they are distracted by hunger or discouraged about their ability to graduate. School districts need to ensure students have appropriate resources, whether that means a school lunch program, after-school tutoring, or coursework that matches their skills. Keeping students engaged at school will help prevent juvenile crime as well.

Some obstacles to improving educational attainment stem from differences between the state's urban schools and those in its far-flung and often very small rural districts. The state has a structure in place for long-distance education; enhancing and expanding such learning opportunities will help more students complete high school. Technology-based distance education not only provides broader opportunities for students but also offers benefits beyond those of a traditional classroom environment.¹⁰

In part because of the state's low high school graduation rates, the share of Nevadans completing college is also low. Nevada ranks 46th among the 50 states and the District of Columbia for higher educational attainment, with only 22% of adults holding college degrees, compared with nearly 28% nationwide. Nevada does better at the associate's degree level: The share of adults holding such degrees nearly equals the U.S. rate of 7.5%.

At the highest educational level, Nevada is one of three Mountain West states—

Idaho and Wyoming are the others—not to have a research university classified by the Carnegie Foundation as an institution with “very high research activity.”¹¹ The University of Nevada campuses at Las Vegas and Reno are each labeled “high research activity” institutions, one step down from the top rank. Rankings are based on the number of doctoral degrees awarded and the level of research funding. To have truly competitive universities, research and development funding needs to increase. Nevada lags every state except Louisiana and Wyoming when measured by R&D funding relative to gross state product. Boosting R&D spending to 1.5% of the state's GSP from the current 0.6% would bring Nevada to the middle of the pack for all 50 states and the District of Columbia. The current national average for R&D expenditures is 2.7% of GDP.

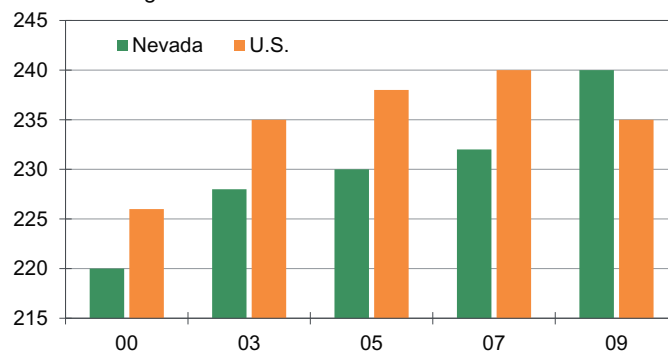
Because of education's vital role in advancing a community's economic development and quality of life, Nevadans need to assess both the state's achievements and progress toward improving educational attainment.

A Vision of Education

The Nevada Vision Stakeholder Group identified four goals within education. The first is to raise educational attainment across the state. A high school diploma is an important first step, but Nevada needs to build its base of those with college degrees and high-

Chart 7: Not All Is Dreary

NAEP fourth grade math score



Source: U.S. Department of Education

er. Strategies for achieving these objectives include alternative education, differentiated diplomas and student scholarships.

While raising overall educational attainment is the overarching goal, the group also identified three subsidiary goals for early-childhood education, elementary and secondary education, and higher education. To start all children on the right path to educational attainment, the group felt the state should increase options for early-childhood education and enroll more children in such programs. Giving children the advantage of early schooling will be an important step toward the long-run goal of greater overall achievement.

Students in elementary and secondary education need access to quality opportunities. At the most basic level, the state can encourage the provision of breakfasts so students are not attending school hungry. Nevada should also work to attract well-qualified teachers through licensing reciprocity, competitive compensation, and professional development opportunities.

After reinforcing elementary and secondary education, the group felt the state's universities and colleges should work to increase completion rates and attract more research possibilities. Without a broader culture of college attendance, as well as an attractive array of opportunities, the state will struggle to increase educational attainment.

⁹ U.S. Department of Education, Institute of Education Sciences. "Digest of Education Statistics: 2009." <http://nces.ed.gov/programs/digest/d09/>.

¹⁰ Edwards, Mark Evans, Sheila Cordray and Jon Dorbolo. "Unintended Benefits of Distance-Education Technology for Traditional Classroom Teaching." *Teaching Sociology*, Vol. 28, pp. 386-391. 2000.

¹¹ The Carnegie Foundation for the Advancement of Teaching periodically updates the Carnegie Classifications of Institutions of Higher Education, designed to allow comparisons among institutions. The most recent update was done in 2005. More information is available at <http://classifications.carnegiefoundation.org/>.

GOAL	OBJECTIVE	METRIC	STRATEGIES
Raise educational attainment	1. Increase the share of adults with at least a high school diploma	High school freshman graduation rates, public schools	<ul style="list-style-type: none"> » Alternative models of K-12 education » Promote effective capital investment in school districts » Expand offerings of differentiated diplomas
	2. Encourage higher education, associate's degrees and higher	The share of the labor force 25 to 64 years old with at least a high school diploma	<ul style="list-style-type: none"> » Support Millennium Scholarship and other student subsidies
Raise the quality of elementary and secondary education	1. Broaden student engagement	Pupil-to-teacher ratio	<ul style="list-style-type: none"> » Maximize schools' ability to attract good teachers » Increase communication with parents » Nurture and extend teachers' skills » Expand English Language Learner programs » Enhance staff development and evaluation » Enable students to focus on their work
	2. Bring school attendance and achievement levels up to national averages	NAEP 4th grade test scores	<ul style="list-style-type: none"> » Stabilize funding » Expand distance learning options » Attract qualified teachers, particularly for math and science
Increase the value of education at Nevada's universities and colleges	1. Increase graduation rates	Statewide six-year college graduation rate	<ul style="list-style-type: none"> » Increase the number of college degrees in fields related to growth industries » Stabilize higher education funding
	2. Give universities more control over tuition	TBD	<ul style="list-style-type: none"> » Allow public universities to retain a larger share of tuition » Increase the share of out-of-state students while expanding the total student base » Allow public universities to charge differential tuition for different programs and schools
	3. Raise the level of university research	University R&D funding	<ul style="list-style-type: none"> » Stabilize funding and seek additional dollars for university research
Increase early-childhood education options	1. Enroll more children in early-education programs	Share of three- and four-year olds enrolled in school	<ul style="list-style-type: none"> » Raise standards for early-childhood education centers » Expand community-based programs » Invest in early-childhood education » Provide low-income families with options beyond childcare

GOAL 1

Raise Educational Attainment

OBJECTIVE #1
Increase the share of adults with at least a high school diploma.

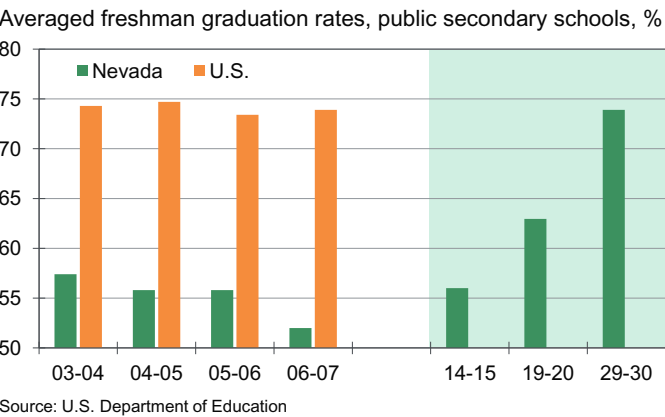
METRIC

High school freshman graduation rates, public schools

Reported by the U.S. Department of Education, the average freshman graduation rate examines the number of high school graduates in a given year compared with the number of entering students four years earlier. This indicates how successful the school is in advancing students toward the completion of their secondary schooling.

The measure has limitations, as it does not account for students who changed schools between freshman year and graduation nor does it break down students by racial or ethnic groups. Yet it still provides a useful picture of secondary education. The state's goal here is to rise off its recent low by 2015, cut its gap with the national average in half by 2020, and match the current U.S. average in 2030.

Increase High School Graduation Rates



STRATEGIES

Alternative models of K-12 education

Conventional forms of elementary and secondary education serve many students well, but alternate paths to graduation would improve success rates. Innovations in alternative education—including magnet schools, apprenticeship programs, career academies, charter schools, community college high schools, empowerment schools, international baccalaureate programs, online learning, and technical academies—could be made available to students. Alternative education programs can stand alone at the secondary level, as with vocational technology campuses, but because of cost limitations, school districts should be encouraged to consider establishing programs within the structure of existing high schools.

The state should embrace online learning opportunities as well as private charter schools. Students need to be engaged and encouraged to graduate. Alternate options for education should be offered in early grades as well as in high school. Children who cannot read at grade level by the third and fourth grade are less likely to graduate.

There are no formal national standards for education, but Nevada can take the initiative to set its own high standards for school districts. To meet students' education needs, reasonable but challenging goals should be in place. Schools need to be visionary and focus on the job markets of tomorrow, offering education to meet those future needs. Schools' primary goal should be basic literacy and math proficiency, but there should be options for students.

Even while encouraging students to aim for college, schools should prepare them for a variety of post-high school options. Vocational training can open doors for many students. The state must be sure that amid the push to raise educational attainment levels, it does not devalue noncollege options.

STRATEGIES

Promote effective capital investment in school districts

Because school districts must operate within available budgets, the state should promote efficient and effective spending, including capital investments. Vocational high schools are costly, for example, so districts should be encouraged to investigate options such as satellite programs in existing high schools. New initiatives should not weaken existing programs, unless these are shown to be ineffective.

Expand offerings of differentiated diplomas

All secondary school graduates in Nevada receive the same high school diploma. For some students this sets the bar too low; they are not challenged to work up to their potential. Differentiated diplomas could include a high-performer designation, for those with exceptional scores or those in honors courses.

For other students the barriers may be too high. Some struggle through school, while others do not receive enough credit for performance in one subject area while lagging in other areas. Talented students can waste time on subjects irrelevant to their future. An alternative approach might allow for more flexible forms of testing. Students should be encouraged to develop their strengths rather than being held back by their weaknesses.

GOAL 1

Raise Educational Attainment

OBJECTIVE #2

Encourage higher education, associate's degrees and higher

Post-secondary education is important, but it can take a number of forms.

METRIC

The share of the state's labor force 25 to 64 years old with at least a high school diploma and the share of the state's labor force 25 to 64 years old with at least some college.

The American Community Survey collects responses on both educational attainment and labor force status. Focusing on those in their prime working years provides a look at the educational attainment of the state's workforce, specifically. Because the data show the share of the labor force with at least a high school diploma, this is a good proxy for overall educational attainment. As the goal is to encourage higher education, it is also useful to examine those with any college experience. Completing high school is an important first step to higher education, but the state should also be mindful of how many students progress to college. Nevada's goal is to begin seeing improvement in these metrics by 2015, to reduce the state's gap with the national average by half by 2020, and to meet the current U.S. averages by 2030.

STRATEGY

Support Millennium Scholarship and other student subsidies.

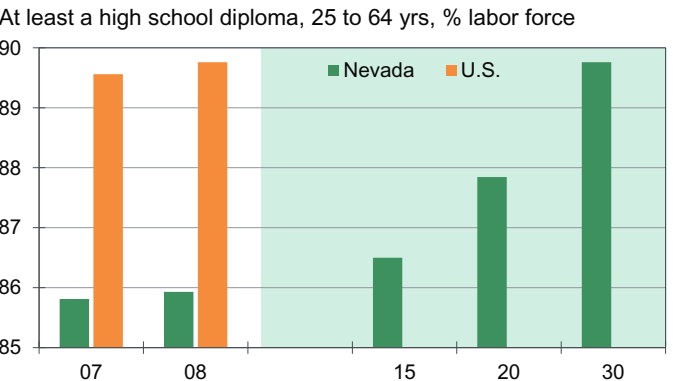
Nevada will have difficulty attracting new businesses if it does not offer strong secondary and postsecondary educational opportunities. The combination of the current business climate and Nevada's educational attainment gap can make it difficult to attract employers to the state. Without both a short- and long-term commitment to education, the state will struggle to create a culture of higher educational attainment.

Nevada has one such program in place, the Millennium Scholarship, which is based on students' grades and test

scores. This laudable program could be enhanced by tying it to other metrics such as honors classes. The state should encourage such rewards for greater achievement.

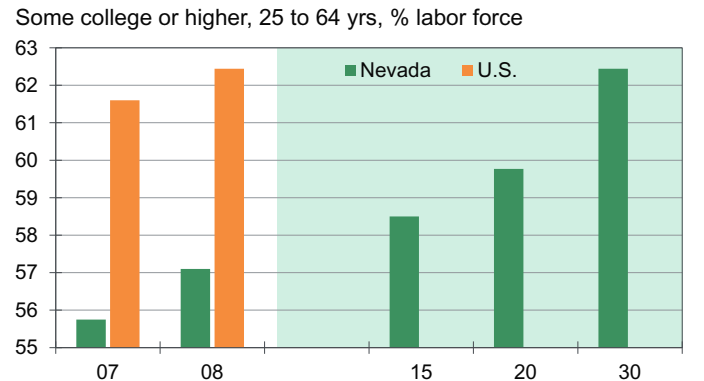
Committee to Evaluate Higher Education Programs (A.B. 203 of the 2003 session) recommended the creation of a needs-based financial aid program to keep college affordable for the least affluent of Nevada's residents. The NVSG believes this would be a valuable strategy for improving educational attainment statewide. State-sponsored charter schools can also help more students complete secondary school.

Encourage Higher Education



Sources: Census Bureau: American Community Survey 3 yr estimates, Moody's Analytics

Encourage Higher Education



Sources: Census Bureau: American Community Survey 3 yr estimates, Moody's Analytics

GOAL 2

Raise the quality of elementary and secondary education.

OBJECTIVE #1
Broaden student engagement

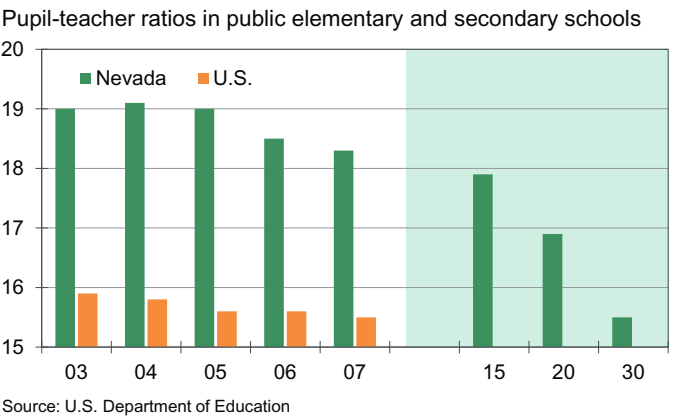
To make completing high school an attainable goal, students need resources and motivation.

METRIC

Pupil-to-teacher ratio

The Department of Education's pupil-to-teacher ratio can be one gauge of student engagement. This measure includes teachers for students with disabilities and other specialists who are not counted when calculating average classroom size. A lower pupil-to-teacher ratio means that students have more access to instructors and that teachers are better able to know and engage students. Given the difficulty of directly measuring engagement, this metric can be a useful, quantifiable proxy. The goals are to extend recent improvement on this scale through 2015, to halve the gap with the nation by 2020, and to meet the current U.S. average by 2030.

Broaden Student Engagement



STRATEGIES

Maximize schools' ability to attract good teachers.

Fully engaging students starts with qualified, talented teachers. Over the long term, the state must both train Nevadans to teach and make it an attractive destination for teachers trained elsewhere. Teacher licensing reciprocity, which Nevada has with many states, makes it easier for qualified teachers to relocate. The state needs to maintain appropriate standards while fostering a welcoming environment for new teachers.

Nevada should also develop new paths to teaching careers, rather than recruiting only college graduates with education degrees. Aspiring teachers with work experience in different fields may bring valuable skills and experience to the classroom. Encouraging nontraditional routes to teaching will help attract a broad range of talented and qualified teachers. Just as there are no national standards for students, there are none for teacher training and licensing; therefore, Nevada needs to strike a balance between attracting and training

teachers and ensuring that its standards are high enough to ensure quality.

Increase communication with parents.

Efforts to help students complete their schooling must include parent communication and engagement. The desire to finish high school should be reinforced at home. Schools can use technology to open multiple channels of communication between teachers and parents, thus accommodating widely disparate work schedules in rural areas and cities with 24/7 hospitality-based economies.

Nurture and extend teachers' skills.

A commitment to professional development programs for teachers can aid in attracting staff. Such programs are often reduced or eliminated when budgets are tight, but teachers need support to provide the best possible classroom experience for students. Professional development programs can help create a welcoming environment for teachers.

STRATEGIES

Expand English Language Learner programs.

English Language Learner programs are an important component in Nevada's education system. Given the state's changing demographics, education goals cannot be met without support for ELL programs. This is an area where the state should encourage school districts to explore public-private partnerships while coordinating and providing the infrastructure for such programs. Some students cannot be properly engaged without the support of an ELL program.

Enhance staff development and evaluation.

Teachers should be encouraged to effectively reach out to students and evaluated in part according to their efforts and success in doing this. Beyond test scores, schools should find ways to fairly measure students' growth and improvement. As a step in this direction, the 2010 special session of the Nevada legislature introduced a link between student achievement and teacher evaluations. While there are no national standards for measuring teacher performance, Nevada can lead the way in setting ambitious standards and

ensuring that teachers encourage their students to grow.

Professional development programs would assist teachers in these efforts, which should be consistent and monitored across districts and schools. Teachers need support and feedback to effectively meet students' needs. Revisiting some facets of the current system could lead to an improved process. The teacher evaluation process should be examined to gauge its effectiveness. The state should re-examine the trial period for new teachers. Nevada should consider making any performance-based pay adjustments an extra facet of compensation as part of the effort to attract high-quality teachers.

Enable students to focus on their work.

Children who come to school hungry or whose families struggle to provide other basic necessities are unlikely to remain engaged in their own education. Programs such as school breakfast, food stamps through SNAP, and information about the earned income tax credit for low-income families can help provide the resources children and their families need to focus on their schooling.

GOAL 2

Raise the quality of elementary and secondary education.

OBJECTIVE #2
Bring school attendance and achievement levels up to national averages.

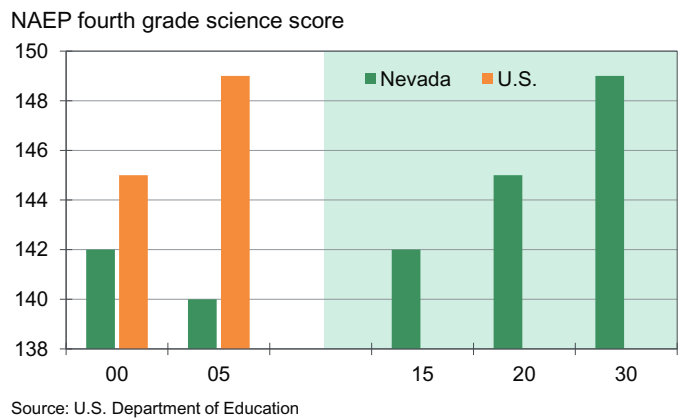
METRIC

NAEP fourth grade test scores

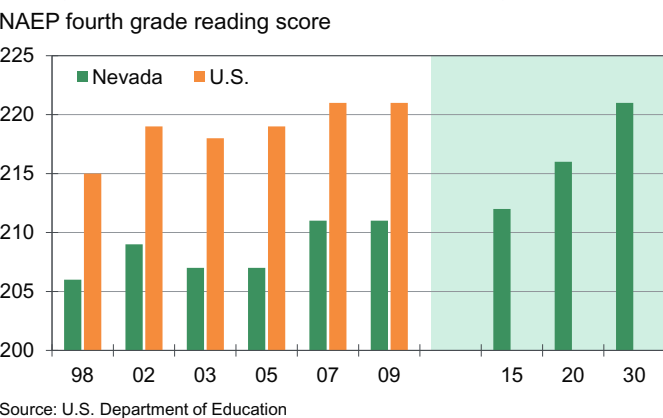
The Department of Education administers the National Assessment of Educational Progress to fourth, eighth and 12th grade students. These tests provide a picture of student performance across the country and cover a variety of subject areas. Fourth grade reading, math and science scores are the metric adopted here because the NVSG feels substandard results need to be recognized and corrected as early as possible in students' lives.

While no test score can measure all aspects of education, the NAEP provides a way to compare performance across states and jurisdictions or over time. Within the reading test, the goals are to begin to make modest improvements by 2015, to shrink the gap between Nevada and the nationwide average by 2020, and to match the current U.S. average by 2030. Within the science test, the goals are the same: to begin to make modest improvements by 2015, to shrink the gap between Nevada and the nationwide average by 2020, and to match the current U.S. average by 2030. Within the math test, the goals are to maintain the state's current level, which is on par with recent U.S. trends.

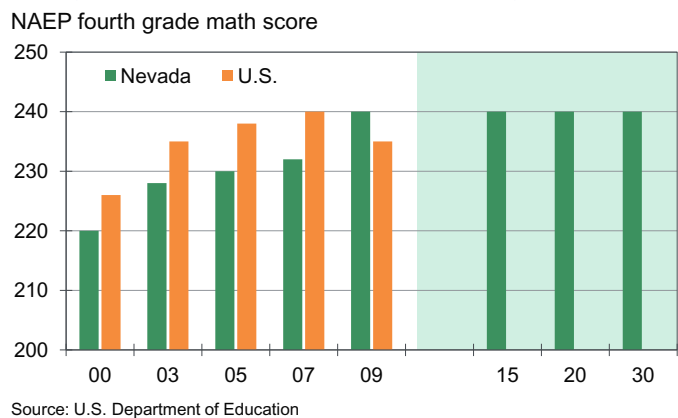
Bring Achievement Up to U.S. Average



Bring Achievement Up to U.S. Average



Bring Achievement Up to U.S. Average



STRATEGIES

Stabilize funding.

While the primary purpose of this report is to set broad long-term goals, it is important to acknowledge that funding is a concern. High-quality education offerings require appropriate funding, and Nevada needs to be able to take advantage of various sources of funding so that new programs do not crowd out current programs that are effective.

As an example, Nevada's recent unsuccessful proposal for federal Race to the Top funding highlighted the importance of having experienced grant writers to make the state's case. The NVSG heard frequently that Nevada's state and local governments as well as private agencies are handicapped when they compete against other jurisdictions for funds. Knowing where to look for funding oppor-

tunities and having the expertise to go after those grants would improve the state's overall education programs.

Expand distance learning options.

In tandem with ensuring that all students have educational opportunities that match their interests and learning styles, Nevada should encourage the use of distance learning in secondary schools. No matter where they are located, students need to be engaged in a variety of ways to achieve their highest learning potential. Online learning could be an important tool for achieving this objective.

This strategy includes providing sufficient telecommunications bandwidth in rural areas. The A.B. 203 of the 2003 session recommended that the populations outside Nevada's

three metropolitan areas should have equitable access to educational opportunities. The state should embrace online learning opportunities, especially in this situation. Expanding the technology capabilities of the statewide education system would benefit all students, giving a particular boost to those in rural areas. Additional bandwidth would allow rural students greater access to learning opportunities, increasing their overall educational attainment.

Attract qualified teachers, particularly for math and science.

Nevada needs to increase efforts to attract and retain teachers in core areas. Encouraging teachers from other states to consider moving to Nevada is one way to increase the state's talent pool, as is creating path-

ways for those seeking second careers in teaching. The AB 203 Committee recommended that the Nevada System of Higher Education expand its offering of night and weekend courses for teacher training. Qualified and talented teachers will be better able to engage students in their classroom.

Some very useful programs are in place that build teaching staff such as Teach for America. While this can be a useful tool, the state needs to be sure that such programs encourage teachers to make long-term commitments to Nevada.

Students need access to quality teachers to perform at their potential. To compete nationally and globally, Nevada's students need teachers who can provide high-quality education in all fields, but particularly in math and science.

GOAL 3

Increase the value of education at Nevada’s universities and colleges.

OBJECTIVE #1
Increase graduation rates

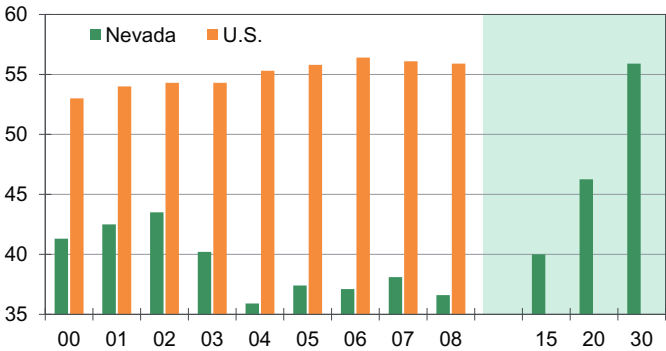
METRICSTRATEGIES

Statewide six-year college graduation rate.

The Department of Education tracks the percentage of students at each U.S. college and university who receive their bachelor's degrees within six years after starting their studies. This allows for comparisons among institutions and among states. Nevada has languished near the bottom among the 50 states in recent years. Goals for the state begin with modestly advancing its ranking by 2015, eliminating half the gap between the state and the national average by 2020, and matching the current U.S. average by 2030.

Increase Postsecondary Graduation Rates

Six-yr graduation rate of bachelor's degree students



Sources: Dept. of Education, National Center for Higher Education Management Systems

STRATEGIES

Increase the number of college degrees in fields related to growth industries.

Along with simply awarding more college degrees, Nevada needs degree programs that are likely to help drive the state's economy forward. Nevada's university system and community colleges should engage in partnerships to train workers for tomorrow's private and public sector jobs. Giving secondary school students a better understanding of the state's degree options could also encourage them to continue their education.

Stabilize higher education funding

Just as at the K-12 level, improving education at the college and university level requires funding. Fortunately, higher education is able to draw on a wider array of funding sources, including tuition and research grants from both government and private agencies. The university system needs to take advantage of all possible resources. Capital campaigns enable higher education institutions to fund construction, teaching and research. The University of Nevada at Las Vegas recently completed a successful capital campaign; other institutions across the state should be encouraged to initiate similar programs.

GOAL 3

Increase the value of education at Nevada’s universities and colleges.

OBJECTIVE # 2
Give universities more control over tuition.

To allow the state's higher educational system to develop the appropriate programs to expand its offerings and become more entrepreneurial, public colleges and universities should be given more autonomy to set and retain tuition.

METRIC

TBD

STRATEGIES

- Allow public universities to retain a larger share of tuition revenue**

Nevada's public colleges and universities could be more entrepreneurial or innovative if they could directly manage tuition revenue rather than having it go into the state's general fund. Allowing schools to retain a larger share of direct tuition revenue would create more certainty for long-term planning.
- Allow public universities to charge differential tuition for different programs and schools.**

Higher educational programs and schools have varying costs and market values, and the University of Nevada system should be allowed to charge differential tuition. Specialized equipment and the need to attract highly qualified faculty can raise the cost of providing certain facilities and programs. Students who pursue such degrees as masters in Business Administration have higher earnings potential, and schools can adjust tuition rates accordingly. Differentiated tuition is increasingly used by public universities across the U.S. to maintain and expand degree offerings.
- Increase the share of out-of-state students while expanding the total student base**

Out-of-state students contribute to the state, not only through higher tuition payments, but also indirectly by spending on housing, goods and services. These students contribute to Nevada's tax base. Attracting more out-of-state students also would help subsidize the costs of a higher education for in-state students. At the same time, the higher educational system should expand the overall student base, so that more in-state students are able to attend college.

GOAL 3

Increase the value of education at Nevada’s universities and colleges.

OBJECTIVE #3
Raise the level of university research.

Expanding research can effectively broaden the reach and raise the profile of Nevada's higher education system.

METRIC

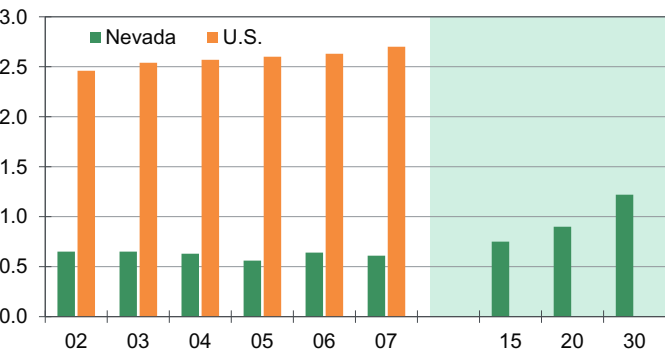
University R&D funding

The National Science Foundation collects data from various university research funding sources, including federal and state governments, businesses, and nonprofits. To compare performance with other states, the metric used here is total research funding dollars by state as a share of gross state product.

The figure gives a good picture of the role that university research plays in a state's economy. As has been seen in such regions as Silicon Valley, well-funded university research facilities can attract private industry and generate entrepreneurship. Nevada lags behind all but two states in this metric. Doubling its share of research dollars relative to GSP—the goal for 2030—would make Nevada 35th in this year's state ranking. Interim goals are to make modest progress by 2015 and to be halfway to the final goal by 2020.

Increase Appeal of University Research Facilities

R&D expenditures, % of GDP



Source: National Science Foundation

STRATEGY

Stabilize funding and seek additional dollars for university research.

To expand its research capabilities, the state system of higher education must improve its ability to seek and obtain grants. A sophisticated approach to grant writing can yield a high payout. Boosting the state's appeal as a research destination would help develop ties among educational institutions, philanthropic organizations and private business. Greater university research opportunities will also enhance workforce development.

The A.B. 203 of the 2003 session made several recommendations about funding research at institutions of higher education, including more public-private partnerships and state funding. The NVSG supports these recommendations.

GOAL 4

Increase early-childhood education options.

OBJECTIVE #1
Enroll more children in early-education programs

Many children would greatly benefit from earlier engagement in the learning process. Going beyond day care, early-childhood education programs can give children a boost toward success.

METRIC

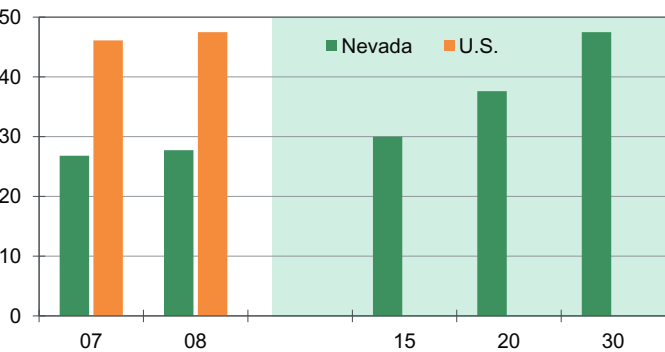
Share of three- and four-year-olds enrolled in school.

The American Community Survey documents the number of children aged three and four who are enrolled in school programs. These data provide a snapshot of the early-childhood education picture in each state. Nevada lags the national average, with just over one in four children attending preschool, compared with nearly half of all children nationally.

Numerous factors influence parents' decisions to enroll their children in such programs, including their employment status and the cost of school programs. The rate is nonetheless a good proxy for access to early-childhood education. Nevada's goals are to show modest progress by 2015, to reduce the gap with the nation by half by 2020, and to meet the current U.S. average by 2030.

More Children in Early Education Programs

3- to 4-yr-olds enrolled in school, %



Sources: Census Bureau: American Community Survey, Moody's Analytics

STRATEGIES

Raise standards for early-childhood education centers.

College readiness begins in preschool, and students' ability to compete in a global economy starts at basic skill levels. Ensuring that Nevada's children have early access to education will pay off over many decades. To build an infrastructure of early-childhood education centers, the state must create a framework of requirements. Many programs are overseen by substate agencies, but the state needs to set standards to ensure equity and quality.

Nevada needs to raise its low requirements for early-childhood teacher qualification. This includes both initial requirements for certification and continuing education benchmarks. Early-childhood education is not a highly profitable endeavor, making enforcement of standards difficult. Monitoring is thus important to ensure the state's methods are effective. With proper oversight and a framework from the state, early-childhood education offers an opportunity for private philanthropic partnerships. As in many other areas, development

of a sophisticated and grant-seeking infrastructure would be of enormous benefit here.

Expand community-based programs.

Early-childhood education helps prepare children for elementary school. But there is no state mandate for such programs. Community-based programs thus need to be encouraged. The state's role should be to create the infrastructure for accredited programs and encourage community groups to expand existing programs as well as undertake new efforts. A pilot program could help early-childhood education administrators identify best practices for programs.

Invest in early-childhood education.

There is no one way to fund early-childhood education. Some state and federal funding is available, but private funding through philanthropy, grants or partnerships can also be of help. To attract funding, programs need to be result-driven and show the benefits to the children served and the broader community. Community and

STRATEGIES (Continued)

private support is not entirely about funding, but that is certainly a key component. Public-private partnerships linking state and local government with private and community groups would greatly boost access to early-childhood education.

Provide low-income families with options beyond childcare.

Many families struggle to manage preschool expenses. Private funding can complement government efforts to make early-childhood education available

for all who seek it. The state's agencies that serve low-income families need to make sure parents are aware of opportunities that do exist for their children.

Focus On | Health & Well-being

Nevadans enjoy a magnificent natural landscape, many recreational opportunities, and inviting, compassionate communities. These attributes have attracted a growing population that is younger and more active than average, helping to sustain rapid economic growth and low rates of poverty across much of the state. Despite these advantages, however, Nevada fares worse than many states with respect to the health of its residents and the quality of healthcare that they are able to receive. To meet the vision of the Nevada Vision Stakeholder Group, more must be done to expand access to health services, improve cost efficiency, and make Nevadans and their communities more healthy.

Like most states in the Mountain West, per-capita healthcare spending in Nevada is below the U.S. average, but Nevada's expenditures have also grown more slowly than in neighboring states (see Chart 1). Although slower growth in healthcare spending is positive when it results from greater efficiency, an array of health statistics suggest that Nevada also trails most other states in health outcomes and in the healthcare resources it provides.

How Nevada Measures Up

For several years, Nevada has ranked among the bottom half of states in more than two-thirds of the 18 measures of healthcare quality compiled by the U.S. Department of Health and Human Services.¹ Most recently, Nevada was ranked among the bottom five states in more than one-third of the indicators, including those related to maternal and child health, timeliness of care, and patient safety.

Nevadans suffer high rates of homelessness, mental illness, substance abuse and food insecurity. The suicide rate is among the nation's highest, as are death rates from colorectal cancer and heart disease, conditions that are survivable when diagnosed and treated early. Life expectancy in Nevada is now 76.3 years, the lowest of any state in the West.²

The concentration of healthcare resources in urban areas makes caring for the state's

rural households a challenge; perhaps not surprisingly, health outcomes in Nevada vary more by location than they do in most states.

Relative to other states, more Nevadans who receive health insurance do so through their employers, as employment tends to be highly concentrated in large businesses.³ Employer-based coverage has been fairly generous in Nevada, with employees covering a smaller share of premium costs than in most states. Over the past decade, this has helped Nevada families keep health costs more manageable. With the recent deterioration of economic conditions, however, unemployment and poverty rates are increasing, raising potential health and financial risks for families and placing a much greater strain on state and local health services.

Hunger and a lack of health insurance are widespread among Nevada's neediest residents, including many children. Nevada was recently ranked 49th among states based on the share of children with health insurance. The uninsured rate among children was nearly twice the national average, even though Nevada is ranked only 19th in the incidence of children living in poverty. Over the past decade, the share of children without insurance in Nevada has risen, even as it has fallen nationally (see Chart 2).

Among other things, this reflects Nevada's low participation rate in federal pro-

grams to cover those with low incomes such as Medicaid and the Children's Health Insurance Program (CHIP, administered in Nevada as the Check Up program). The state has lower Medicaid expenditures per capita than any other, with a low level of participation and benefits (see Chart 3).

Because of Nevada's low level of participation, spending by the federal government on healthcare and aid programs for Nevadans is just 71% of the average in other states. In effect, Nevada is leaving money on the table because the federal government pays over half the cost of Medicaid (and about two-thirds the cost of CHIP), while state and local communities bear the full direct and indirect cost imposed by the medical needs of those without insurance.

Despite the potential for long-term cost savings, increasing participation in federal programs is constrained by the difficulty state and local governments face in committing additional matching funds. To avoid leaving federal funds on the table, Nevada would have to increase spending on need-based programs when economic times are toughest (and revenues lowest). Increasing the stability of government finances, an important goal in its own right, would also help improve the provision of health services and increase the "bang for the buck" of Nevada taxpayer dollars through increased federal support.

A Vision of Health

It is clear that Nevada has some way to go to be competitive with other states in delivering quality healthcare and providing a safety net for those displaced by economic downturns. Despite these challenges, members of

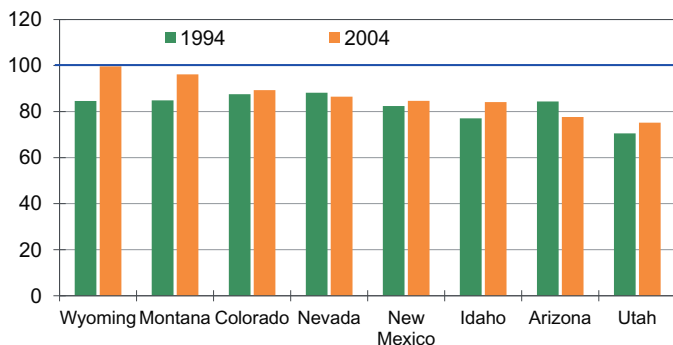
1 2009 National Healthcare Quality Report, U.S. Department of Health and Human Services, December 2009. It is worth noting that Nevada generally ranks highly in one quality indicator: home-based rehabilitation.

2 American Human Development Report, 2008-2009.

3 On average, larger firms—those with 50 or more employees—are far more likely to offer health insurance to employees than are smaller ones (97% vs. 42%, respectively, among U.S. firms). Data from the 2009 Medical Expenditure Panel Survey (MEPS) show that, controlling for size, employers in Nevada are actually *less likely* to offer health insurance than employers in most states: only 93% of larger Nevada employers and 38% of smaller ones do. Employers in Nevada are simply more likely to be large firms than elsewhere in the U.S.

Chart 1: Per Capita Healthcare Spending

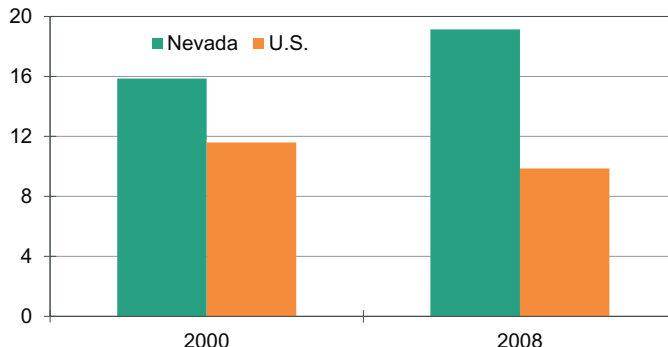
Index of relative healthcare spending (U.S. state avg=100)



Source: Kaiser Family Foundation

Chart 2: Uninsured Children

Uninsured (healthcare), % share of population under 18



Source: Bureau of Labor Statistics: Current Population Survey

the Nevada Vision Stakeholder Group believe a number of steps can be taken to improve health and well-being and expand opportunities for care while simultaneously increasing the efficiency of the healthcare system.

The group's specific objectives can be categorized into three broad areas of focus (shown in the Goals and Strategies Table):

- » Expand Nevadans' access to quality healthcare services.
- » Contain costs by spending healthcare dollars more efficiently.
- » Create healthy communities by fostering partnerships that support good physical and mental health.

These goals are mutually reinforcing in several ways. For example, improving access to treatment also facilitates the use of more cost-efficient treatment options (primary care vs. emergency care, for example). Similarly, addressing gaps in healthcare quality, access, and measures of general well-being will help strengthen Nevada's communities by reducing the strain on residents' finances and improving overall health, making the state a more appealing destination for new residents.

Measures to improve health and well-being can spill over into other aspects of the state's quality of life. Having a healthy and well-fed population enhances worker productivity and improves student performance. With almost a quarter of state spending devoted to healthcare and aid programs⁴, a

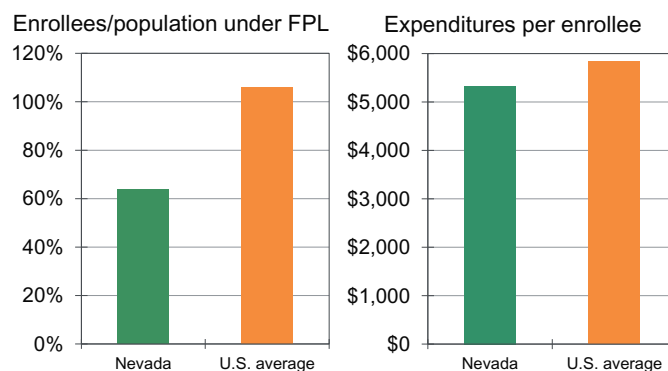
healthier population can also mean significantly less pressure on government budgets.

In addition to benefiting economic growth and state budgets, strategies to promote healthcare also complement efforts to address other issues. In particular, addressing the shortage of local healthcare

workers through university training can add to economic diversity. The average healthcare job is more productive and less tied to local business cycles than jobs in many other industries. Health services will be a national economic growth driver over the next two decades as demand grows among aging baby boomers. Investments made by healthcare and public aid organizations in IT and database management also have the potential to improve the connectedness and broader well-being of Nevada's many rural areas.

Nevada's health challenges are similar in many ways to those faced across the country, and the state's goals as well as metrics for progress can be adapted from those in use elsewhere. In 2000, the U.S. Department of Health and Human Services released Healthy People 2010, which presented a strategic vision for improving health

Chart 3: Medicaid Coverage and Service



Source: Kaiser Family Foundation

Note: FPL = Federal poverty level

outcomes and listed a set of health-related metrics with national targets set for 2010.⁵ Many of the HP2010 metrics and targets can serve as a basis for Nevada's 2020 and 2030 targets.⁶

Expanding Access to Healthcare

The single most important factor determining Nevadans' access to healthcare is whether they have health insurance.⁷ By this metric, Nevada falls below most states; 20% of Nevadans under 65 have no form

4 "2009 State Expenditure Report," National Association of State Budget Officers, December 2009.

5 U.S. Department of Health and Human Services, Healthy People 2010: Understanding and Improving Health, 2nd ed., Washington DC: U.S. Government Printing Office, November 2000.

6 In many cases the national targets for 2010 set in the HHS report remain ambitious targets for Nevada. The HP2010 report will soon be updated and released officially as Healthy People 2020. At that time, the metrics and targets in this report can be re-evaluated if necessary.

7 In 2009, 17% of Nevadans reported not seeing a doctor because of cost. This was higher than the average of other states, 15% (statehealthfacts.org analysis of data from the Behavioral Risk Factor Surveillance System Survey, 2009).

Reforming the System

Given the scope and complexity of the healthcare system in Nevada, serious reform will require significant, coordinated effort by multiple state and local agencies. Yet the time appears ripe for such an undertaking.

Federal healthcare reform legislation passed in 2010 (the Patient Protection and Affordable Care Act¹) creates new opportunities and challenges for states. To extend coverage and reduce the societal burden of caring for those without health insurance, the PPACA requires action by families, employers and state governments. These reforms are scheduled to be phased in through 2014. The legislation's impact on Nevada is being studied by state agencies and affected organizations, but it is clear that an appropriate and effective response should be a central focus of any strategy for improving healthcare in the state.

The federal reforms open new avenues to pursue health and welfare goals discussed by the Nevada Vision Stakeholder Group. In particular, the PPACA creates incentives for states to change the way long-term care is provided, adopt quality and cost-containment measures, increase access to behavioral healthcare, and engage in workforce development.

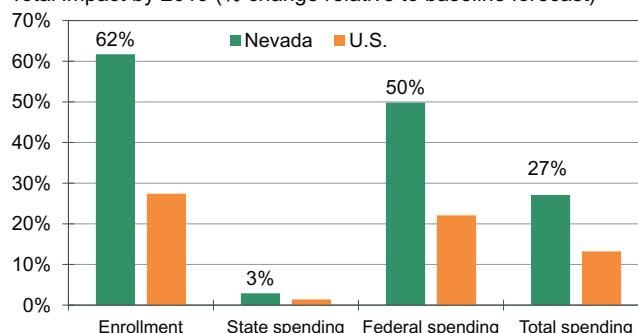
One obvious concern in any reform is cost. Ensuring that healthcare is available and affordable is a goal in itself and can also lead to budget savings for the state. Evidence suggests that expanding healthcare access to the uninsured can reduce total healthcare expenses by shifting demand away from high-cost emergency services toward more efficient primary care and outpatient services.² As a result, initial studies in some states have concluded that the

1 As amended by the Health Care and Education Affordability Reconciliation Act of 2010.

2 The authors of a 2007 study concluded that reducing enrollment of children under Medicaid/SCHIP by 10% would increase overall healthcare costs in the Phoenix AZ community by about \$3.5 million, or over \$2,000 per child enrolled. (Rimsza, M., R. Butler and W. Johnson, "Impact of Medicaid Disbursement on Health Care Use and Cost," *Pediatrics*, Vol. 119, No. 5, May 2007).

Impact of Federal Medicaid Expansion

Total impact by 2019 (% change relative to baseline forecast)



Source: Urban Institute, *Medicaid Coverage and Spending in Health Reform*, May 2010

federal reform will help with state budgets.³ Yet these projections entail great uncertainty about future costs. Effective allocation of healthcare resources, expanded use of information technology, and other targeted investments in productivity measures will be crucial to containing costs while expanding the quantity and quality of care.

While there may be long-term budget savings, the short term will certainly bring additional costs. The implementation of the PPACA is expected to add \$600 million to the Nevada state budget through 2019 because of increased eligibility, higher access rates, and administration and IT costs.⁴ Under the PPACA, states will be eligible for additional federal revenue to help finance the transition. Indeed, the cost of meeting new federal targets for Medicaid enrollment is forecast to be met almost entirely through additional federal revenue (see Chart). This highlights the importance of another central goal of the Stakeholder Group, namely leveraging federal funding to use state resources more efficiently.

3 For example, a recent budget report conducted for the State of Maryland estimates total savings of \$829 million through 2020 (Maryland Health Care Reform Coordinating Council, *Interim Report to the Governor*, submitted July 26, 2010).

4 Testimony of Michael Wildan, Director, Nevada Health and Human Services.

of health insurance, well above the national average of 17%.⁸ Nevadans of all income levels are more likely than average to lack health insurance (see Chart 4), but those families with modest incomes are particularly vulnerable, as their incomes are often too low to afford insurance but too high to qualify for aid.

8 See the Kaiser Family Foundation, statehealthfacts.org. Data Source: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Current Population Survey.

Improving access to health insurance is a necessary step to meeting the healthcare needs of Nevadans, but it is not a sufficient one: Although it helps guarantee access to healthcare, it does not guarantee availability. Nevada has far fewer medical professionals per capita than most other states (see Chart 5), and Nevada's recent economic boom has stretched providers further, as the expansion of healthcare resources has failed to keep up with population growth (see Chart 6). Hospital ca-

capacity utilization rates in Nevada are now above the U.S. average.⁹

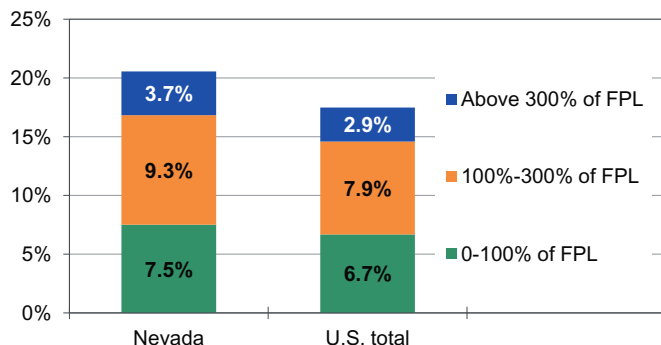
Containing Healthcare Costs

Although the U.S. healthcare system is capable of producing high-quality care, national statistics suggest it is relatively

9 Estimates by Moody's Analytics based on total inpatient days per hospital bed. In 2008, the rate was 249 days in Nevada (68% of a year) and 239 days (65%) for the U.S. as a whole. Data were taken from the Kaiser Family Foundation, statehealthfacts.org, drawing on survey data from the Health Forum LLC an affiliate of the American Hospital Association.

Chart 4: Insurance Coverage Among the Poor

Uninsured share of total nonelderly population, by income group

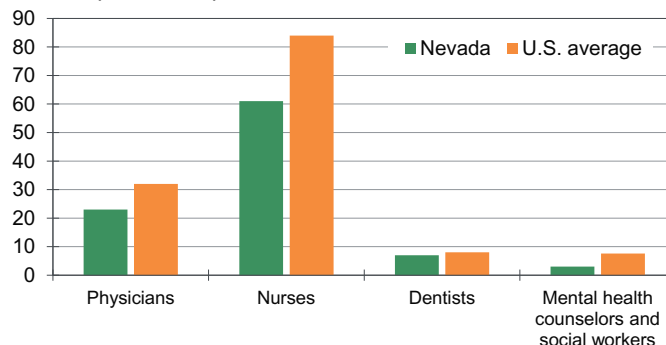


Source: Kaiser Family Foundation

Note: FPL = Federal poverty level

Chart 5: Supply of Healthcare Professionals

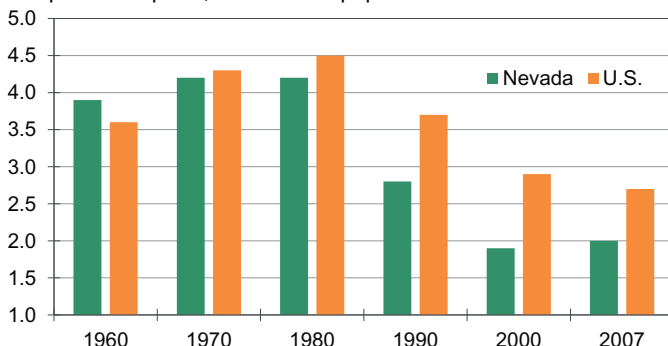
Number per 10,000 persons



Sources: AMA, ADA, Kaiser Family Foundation and BLS

Chart 6: Hospital Beds

Hospital beds per 1,000 resident population



Source: U.S. Centers for Disease Control and Prevention

inefficient compared with those in other developed countries. Americans spend more on healthcare, without a clear, associated improvement in their health. One explanation is that a smaller fraction of healthcare spending in the U.S. actually goes toward improving health.

Rather than a free market—where consumers have choices, compare prices, and pay for what they consume—or a national single-payer system such as Medicare, Americans under age 65 in need of health insurance face a hybrid system involving employers, private insurers and public subsidies. The result has been excessive administrative costs, inefficient cost-shifting, confusing billing practices, and—for many of those left out of the system—measurably worse health outcomes.

Although there has been widespread agreement for many years that the cost of healthcare is growing too rapidly and

the system is in need of reform, there has been far less agreement about the specific steps needed to improve it. Although the problems facing Nevadans and the tools available to address them differ slightly from those being debated at the national level, the broad challenges are the same: how to give

more people access and improve overall health outcomes while keeping costs down. While the national debate over health reform will likely continue, many ideas being discussed at the national level have gained sufficient acceptance to help create a template for moving forward in Nevada.

For example, much attention has been given to the incentives that promote inefficient behavior. Both fee-for-service arrangements and the threat of malpractice suits encourage doctors to maximize the number of procedures rather than their effectiveness, and health insurance companies do not always find it profitable to sell insurance to everyone who might desire it. Individuals and families priced out of the private insurance market do not simply disappear, however. Most of the cost of their care is simply shifted onto taxpayers.

A number of themes have emerged from the national debate over healthcare reform

that can help define strategies for improving healthcare in Nevada. For example:

- » Promote primary care. Money spent on prevention can often pay for itself in cost savings elsewhere in the system.
- » More expensive care is not necessarily better care. Expanding the use of Medicaid waivers for home-based care in Nevada can expand options, promote choice, and be cost-effective as well.
- » Improvements in IT and database management—including the adoption of electronic health records—can help lower long-run administrative costs and potentially reduce medical errors.

A fourth area of potential cost-saving is unique to the state level:

- » Nevada should take better advantage of opportunities to use federal dollars to pay for expanded and improved health coverage for Nevadans.

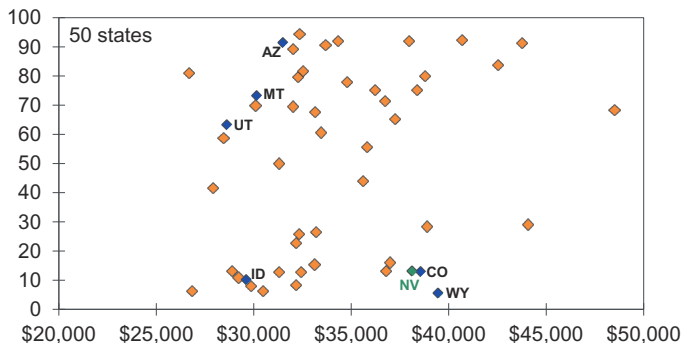
Increasing Efficiency in Healthcare

Primary and Preventive Care

Modern research supports the old maxim that an ounce of prevention is worth a pound of cure in many cases, although not necessarily in all of them. Without doubt, catching problems early can head off serious health issues later, reducing the cost of care

Chart 7: State Medicaid Coverage and Service

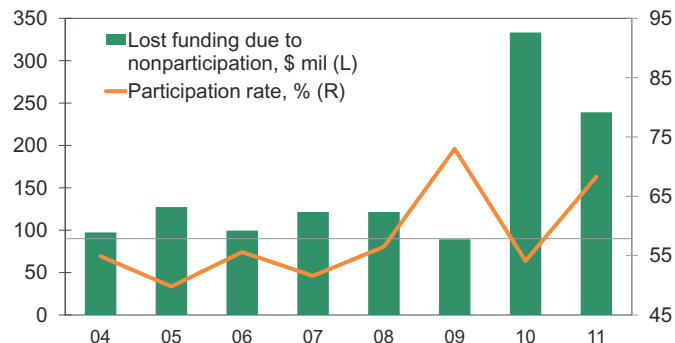
Policy generosity index, relative to average personal income, 2005



Sources: BEA, Nelson A. Rockefeller Institute of Government, Moody's Analytics

Chart 8: Federal Food Stamp Benchmarks

Nevada Supplemental Nutrition Assistance Program, fiscal yrs



Source: Nevada Department of Health and Human Services

and enabling residents to realize their highest potential.¹⁰ Long-term benefits must be weighed against short-term costs, however. To help make its healthcare system more efficient, Nevada must identify and focus on preventive treatments that are targeted and have proved cost-effective.¹¹

For instance, there is evidence that flu vaccinations for children and the elderly as well as certain cancer screenings are both clinically effective and cost-effective.¹² In other cases, the trade-off is more difficult: Prevention can lead to longer, healthier and happier lives, but at a not-insignificant cost.¹³

Studying the cost-effectiveness of treatments can help doctors, families and policymakers in Nevada spend money wisely. Ultimately, however, putting a

price tag on a patient's life requires difficult, subjective decisions about how much health and longevity are worth. Nevadans must determine their own priorities here. Nevertheless, it is easy to endorse initiatives that combine improved quality of life with overall cost savings.¹⁴

The goal of prevention is to shift demand away from high-cost treatments to lower-cost care. This goal can be met in other ways as well by encouraging options such as outpatient services and promoting the use of home and community-based care over centralized institutional care.

Relative to their number of outpatient visits, Nevadans are more likely than those in other states to seek treatment in hospital emergency rooms.¹⁵ This may be in part from Nevada's tourism industry, but it also reflects the high rate of uninsured families in Nevada.

Expanding community-based and residential care options for elders, the indigent, and the mentally ill also promises to deliver efficiency gains. In many cases, community facilities can provide better care at a lower cost than medical institutions. In general, hospitalization and long-term care in public facilities can be a costly and ineffective means of delivery. Moreover, Nevada has shown itself par-

ticularly effective at home-based rehabilitative care.¹⁶

Leveraging Federal Funds

Nevada participates in federal aid programs to a much smaller degree than many states. Overall, Nevada's Medicaid policies are rated less generous than those in most states with comparable per capita incomes (see Chart 7). Although some Nevadans oppose the additional government intervention associated with federal aid programs, generous federal matching funds provide a strong incentive to participate.

For example, food stamps and school meal programs are fully funded by the federal government, with states responsible only for administrative costs. The Nevada Department of Health and Human Services estimates that \$300 million in available food stamp funds went unused during fiscal 2010 (see Chart 8). The income lost by needy households because of forgone earned income tax credits was even larger.

Building Healthy Communities

A healthy community is one that meets the basic needs of its population: first-rate schools, a clean and safe environment, and a wide range of cultural and recreational opportunities. A healthy population remains the foundation for building healthy communities,

¹⁰ Similarly, behavioral health programs may help reduce societal costs in future years. Less research has been done in this area, however.

¹¹ According to the CDC, cancer deaths in Nevada exceed the U.S. average, but the reported incidence of cancer is lower than average (450 vs. 462 per 100,000 people in 2006). This could be evidence of inadequate diagnosis: Only 56% of Nevadans over 50 reported receiving a colon cancer screening in 2008, well below the U.S. average of 62% (see Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System).

¹² Maciossek et al. "Priorities Among Effective Clinical Preventative Services," *American Journal of Preventative Medicine*, 2006.

¹³ For instance, both programs aimed at preventing relapse among former smokers and those aimed at preventing tobacco use among 7th and 8th graders result in an increase in QALY (quality adjusted life years), but neither entails a net cost saving. Moreover, the cost difference in these antismoking programs is significant: the former program is estimated to cost \$190/QALY, while the latter is estimated to cost \$23,000/QALY (see Cohen, Neumann and Weinstein, "Does Preventative Care Save Money? Health Economics and the Presidential Candidates," *The New England Journal of Medicine*, February 14, 2008).

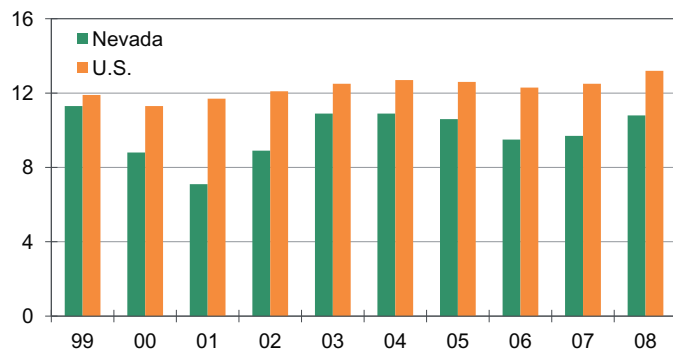
¹⁴ For detail on state plans, see "Nevada Strategic Health Care Plan," Report of the Legislative Committee on Health Care, 2007.

¹⁵ In 2008, Nevadans made 1 ER visit for every 3.7 outpatient visits. The U.S. average was 1 ER visit for every 5 outpatient visits. (Calculations based on data from Statehealthfacts.org).

¹⁶ 45% of home health patients had reported improvements in their mobility—the 7th highest rate among the 50 states and DC (Agency for Healthcare Research and Quality, National Healthcare Quality Report, 2009).

Chart 9: Poverty

Persons in poverty, % of population



Source: Census Bureau

and there are several important objectives the state should address regarding its citizens' overall well-being and quality of life. Foremost among these are improving indicators of nutrition and physical and mental health.

Poverty and food insecurity are detrimental, both directly and indirectly, to these objectives. Although the rate of poverty in Nevada is below the national average, it is rising (see Chart 9). Nevada

now leads the country in foreclosures, which, in June 2010, occurred in 1 in 88 homes (relative to 1 in 411 nationally). This highlights the importance of contending with problems of economic opportunity and the state's safety net for those who experience eco-

nomics and social dislocation.

Strategies that respond to poverty and homelessness need to consider demographic trends. The poor in Nevada tend to be highly concentrated in urban areas.¹⁷

¹⁷ According to a study by the Urban Institute and Kaiser Commission on Medicaid and the Uninsured, 92% of the poor in Nevada live in metropolitan areas, versus 82% for the U.S. as a whole. This difference mirrors the higher overall urban concentration of the population in Nevada (see The Kaiser Family Foundation, www.statehealthfacts.org, for details).

This has some benefits, as it may help lower the cost of delivering services to those at risk. It also risks drawing attention away from the rural poor when policies are being designed, however.

Poverty is linked to immigration: Hispanics have a higher poverty rate in Nevada than in most of the country, while the poverty rate among both white and black non-Hispanics is lower. This suggests that efforts promoting community outreach and assimilation can be important in addressing not only the symptoms but also the root causes of poverty.

Poverty remains a complex and multifaceted problem, with few easy remedies. What the state can focus on more directly and immediately is the detrimental impact that poverty has on social conditions such as hunger. The fraction of Nevada households classified as food insecure is an important metric in assessing Nevada's progress in this area.

GOAL	OBJECTIVE	METRIC	STRATEGIES
Provide all Nevadans with access to quality healthcare	1. Expand health insurance coverage	Share of the population with health insurance	» Expand enrollment in Medicaid and CHIP » Create new options for private insurance
	2. Increase healthcare resources	Number of physicians (per 10,000 population)	» Improve training and professional development in medicine » Promote philanthropy
Increase efficiency to contain costs	1. Promote preventive care	Immunization rate at 19-35 months of age (%)	» Increase access to and use of primary care facilities
	2. Shift use patterns toward more cost-effective treatments	Outpatient visits / ER visit	» Expand health insurance and the use of home and community-based care waivers for Medicaid patients
	3. Improve health information technology and database management		» Subsidize the cost of technology adoption among smaller firms
	4. Increase use of outside funding	Federal health revenue as a share of general revenue	» Expand enrollment in federally funded programs
Build strong and healthy communities	1. Reduce the burden of poverty on families and communities	Share of families classified as food insecure	» Provide opportunities for housing and support social services » Increase support for mental health professionals
	2. Promote healthy lifestyles	Obesity rate (% with BMI>30), adult smoking rate	» Promote exercise and good diet through primary care and public education campaigns

GOAL 1

Provide All Nevadans With Access to Quality Healthcare

OBJECTIVE # 1

Expand health insurance coverage

The fraction of Nevadans covered by private employer-based insurance is slightly higher than in most states, but the low rate of participation in publicly funded alternatives, including Medicaid and CHIP, puts some of the state's most vulnerable such as children and the indigent at much greater risk. This is not only a social problem but a financial one, as several studies show uninsured families typically eschew more efficient primary and preventive care options in favor of more expensive care such as emergency services.

METRIC

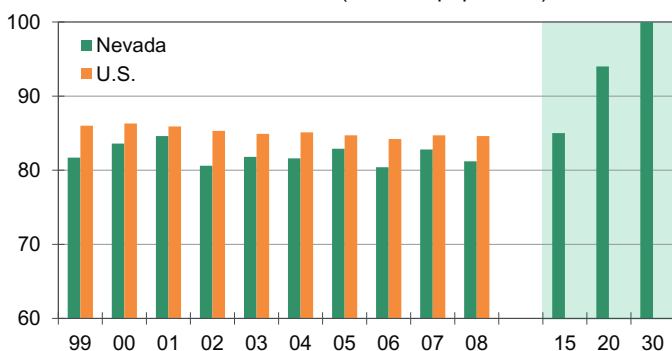
Share of the population with health insurance.

The most useful and comprehensive of Nevadans' access to healthcare services is the share of the population with health insurance of some kind, either private or public. This broad metric captures overall progress toward the goal of equal opportunity for all Nevadans: It does not identify who is insured or how, but simply how many. Tracking insurance rates for specific groups where progress is most needed such as among children and the indigent would also be valuable.

Although the long-term goal should be universal coverage, from a practical standpoint, this may be difficult to achieve within the private insurance market. However, federal initiatives to expand Medicaid eligibility and create new insurance markets will take effect by 2014, which makes a 10-year goal of 94% reasonable, putting Nevada in line with the average share of the U.S. population who are estimated by the Congressional Budget Office to remain without insurance after health care reform is fully implemented.

Health Insurance Coverage

Individuals with health insurance (% of the population)



Source: Census Bureau

STRATEGIES

Expand enrollment in Medicaid and CHIP.

Increasing insurance coverage is not only crucial to improving health outcomes, it is also essential for cost containment. Comparisons of coverage rates relative to other states suggest the quickest way to reduce the number of uninsured is to expand participation in public health insurance programs. Indeed, the expansion of Medicaid eligibility is a central component of the federal healthcare reform legislation (see box on page 59).

Create new options for private insurance.

While it is typically straightforward and inexpensive for individuals to purchase car or homeowner's insurance, health insurance can be difficult and often prohibitively expensive to obtain the same way. This is because of an informational problem known as adverse selection, which arises because the buyer of insurance knows more about his or her own health than do the sellers. In-

surance companies know coverage is most valuable to those who expect to need it the most, that is, those who expect to incur large health costs. Insurers therefore raise health premiums for individuals well above those charged to large groups. Unfortunately, this means that individuals with average or low healthcare needs but no access to group plans are often priced out of the private insurance market and forced to bear significant risks for themselves and their families.

Part of the federal strategy for expanding health insurance is to help consumers purchase insurance by setting up new private insurance markets, called exchanges. Individuals, particularly those self-employed or working for small businesses, will be able to buy affordable health insurance that pools their risk with others, just as employer-provided health insurance pools risk among employees, avoiding the adverse selection problem.

Allowing Nevada families access to a federal insurance exchange could help bring down

STRATEGIES (Continued)

insurance costs without significant state investment. But the state should also consider setting up an insurance exchange tailored specifically to the needs of Nevadans. Because the goal of these exchanges is to foster participation in private	markets and promote individual choice, the role of government in creating and maintaining such exchanges should align closely with the philosophy of most Nevadans. It is also important that efforts to expand insurance	through Medicaid and new private markets not crowd out existing private and employer-based coverage. Otherwise, the result may be merely to substitute one form of insurance for another, with no overall	expansion of coverage. That said, not all such substitution is problematic: In some cases, shifting families from individual private coverage into larger, pooled-risk programs could lower healthcare costs for many Nevadans.
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GOAL 1

Provide All Nevadans With Access to Quality Healthcare

OBJECTIVE # 2

Increase healthcare resources

The share of Nevadan employment in healthcare is only half the U.S. average. Nevada should set a goal of increasing its medical resources through strategies that promote capital investment and worker training in the health field.

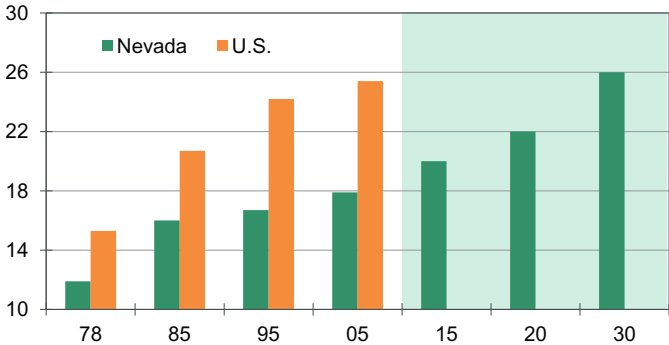
METRIC

Physicians per 10,000 persons.

Using the density of physicians in the population as a proxy for the availability of medical professionals more broadly, Nevada operates with only about 70% of the healthcare resources of the average state. As a long-run goal, Nevada should set out to achieve parity with the U.S. average. Meeting this goal will require adjusting the opportunities and incentives for students to pursue careers in medicine and for doctors to live and practice in Nevada, so visible progress toward this goal may not be immediate. With a concerted effort, however, it should be achievable by 2030.

Medical Professionals

Active physicians per 10,000 civilian population



Source: U.S. Centers for Disease Control and Prevention

STRATEGIES

Improve training and professional development in medicine.

Nevada's healthcare training and research facilities are inadequate, with much less capacity than in other states of similar size. As a result, Nevada not only trails other states in total number of medical professionals, but it appears to be falling further behind, replacing doctors at half the rate of the U.S. as a whole. For instance, in 2009, the University of Nevada produced only 51 new medical school graduates, or roughly one new doctor for every 52,000 residents. In that same year, by contrast, the population in Nevada increased by 70,000

Partnerships with industry such as the new expansion of the Cleveland Clinic in Las Vegas can be a promising approach to attracting and training new doctors. Nevada's universities can also be valuable partners with local and state governments. Encouraging hospitals such as the University Medical Center in Las Vegas to

adopt a more academic model that emphasizes research and teaching has been suggested as a way to increase revenues and attract grant money, helping shift the burden of operating costs away from taxpayers.

Promote philanthropy.

In other states, philanthropy has proved an important and effective tool for financing new investments in healthcare. Nevada's healthcare and aid institutions receive relatively little private philanthropic support.¹ Despite Nevada's recent population boom, the state is home to few permanent residents with the means to make significant charitable contributions. Nevertheless, the recent \$27 million campaign for the Ruvo Brain Institute illustrates the potential for a strategy of expanding philanthropic support in some areas of the state, particularly Las Vegas.

¹ *Giving USA 2010*, a publication of Giving USA Foundation, researched and written by the Center on Philanthropy at Indiana University.

GOAL 2

Increase Efficiency to Contain Costs

OBJECTIVE # 1
Promote preventive care

An array of alarming statistics has caused health policy experts recently to focus on preventive care as an avenue for containing healthcare costs. Nearly 40% of deaths in the U.S. annually are attributable to preventable causes such as smoking, poor diet, physical inactivity and substance abuse. The financial cost is significant. According to the U.S. Centers for Disease Control and Prevention, three-quarters of U.S. health-care dollars are spent treating chronic diseases such as diabetes, heart disease and cancer that are closely linked to manageable risk factors.

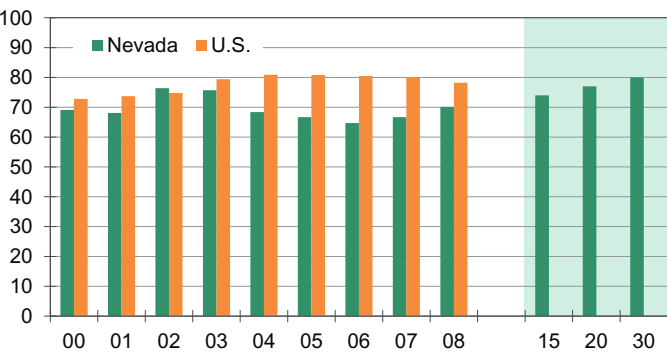
METRIC

Immunization rate at 19 to 35 months of age.

From a public health perspective, steps to prevent outbreaks of communicable diseases are of particular importance. A simple and conventional metric for assessing the state of preventive care in Nevada is the share of children aged 19 to 35 months who have received a full set of recommended immunizations. In 2008, the rate was 70%, short of the U.S. average of 78% and below the HP2010 target of 80%. Nevada should strive to match the current U.S. rate by 2020 and reach the HHS target by 2030.

Childhood Immunization

Children who are fully immunized at age 19-35 mo (%)



Source: U.S. Centers for Disease Control and Prevention

STRATEGY

Increase access to and use of primary care facilities.

The best strategy for raising immunization rates and similar preventive measures is to guarantee access to healthcare. In many ways, primary care is preventive care: Establishing regular contact between patients and their physicians is important not only for preventive treatment, but for physicians making diagnoses and educating patients to the importance of vaccinations and a healthy lifestyle and diet.

Until the goal of access to healthcare is met, regular primary care may not be an avail-

able or affordable option for delivering preventive care. Given the central role of health education in prevention, particularly for those populations most at risk, state Medicaid policies should be re-evaluated for opportunities to improve prenatal and infant care. For instance, 27 states now cover childbirth education under their Medicaid policies, and 31 cover infant care: Nevada covers neither.¹

¹ State Medicaid Coverage of Perinatal Services: Summary of State Findings, Kaiser Family Foundation and The George Washington University Medical Center School of Public Health and Health Services, November 2009, Table 10.

GOAL 2

Increase Efficiency to Contain Costs

OBJECTIVE # 2
Shift use patterns toward more cost-effective treatments

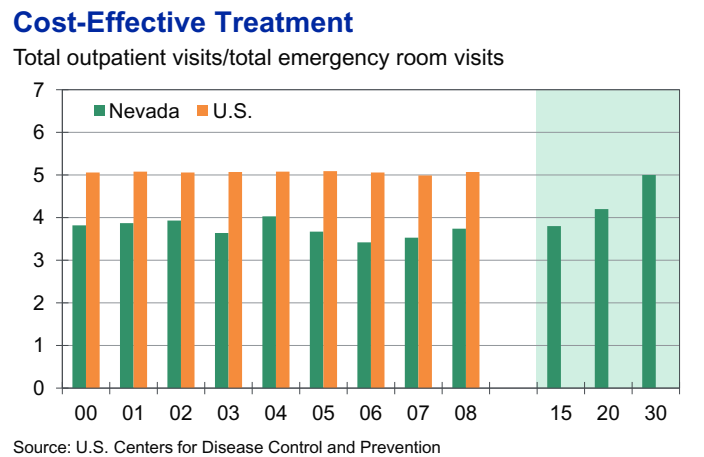
The goal of prevention is to take relatively low-cost steps that avoid the need for high-cost treatment later. Costs can also be saved by substituting more cost-effective treatments for less cost-effective ones. Ambulatory care is typically less expensive than emergency care, for example. Similarly, long-term care can often be provided more easily and at a lower cost through the use of home and community-based services than within an institutional setting.

METRIC

The ratio of outpatient visits to ER visits.

An inefficiency of the U.S. healthcare system lies in the fact that emergency services are among the most expensive methods of treatment, but they are often the cheapest—or only—option for those who lack health insurance, because of hospitals' mandate to treat every patient. A metric that captures excessive use of emergency care is therefore useful in establishing the extent to which demand for healthcare is being met in a cost-effective way.

In 2008, there were 298 emergency room visits in Nevada for every 1,000 residents, significantly less than the U.S. average of 404 visits. In isolation, this statistic seems to suggest that Nevada's emergency services are less overburdened than those elsewhere. At the same time, however, there were 1,115 outpatient visits per 1,000 persons—or about 3.7 outpatient visits for every ER visit. The nationwide average, however, was about 5.1 outpatient visits per ER visit. By this metric, demand in Nevada for ER treatment is quite high; indeed, it ranks in the top 10 states. Nevada should strive to shift patient demand away from emergency services toward outpatient treatments. In particular, the state should strive to stabilize the current rate by 2015, setting a minimum benchmark of 3.8 outpatient visits per ER visit, and then make progress towards reaching the U.S. average of 5 outpatient visits per ER visit by 2030.



STRATEGIES

Expand insurance and waiver coverage.

Both the low overall usage rate and the preference for emergency services over outpatient services are consistent with the state's relatively low rate of health insurance coverage. Much as with preventive care, a natural strategy for achieving a reduction in demand for emergency services would be to increase health insurance coverage.

There is also a natural role for private firms and households in supporting community-based care options. Unfortunately, the relatively small philanthropic base in Nevada constrains private sector support. State funding will also need to support alternatives to institutional care.¹

The state provides options for home- and community-based services through a waiver system operated by the Centers for Medicare and Medicaid Services. In Nevada, and the U.S. more generally, the majority of these waivers go to individuals with mental and developmental disabilities, who are also the most expensive to treat. Meeting the needs of these and other aged and disabled residents with

¹ "Strategic Plan for Senior Services," Nevada Department of Human Services, 2002.

STRATEGIES (Continued)

waivers can be cost-efficient, as the average daily cost of home-based care can be less than the daily cost of institutional care.²

Waivers are not only an economical means of supplying care, they also expand the range of choices available to patients. Demand for waivers is exceeding the supply: The waiting list for these waivers is about one-quarter as large as the total number of existing program participants.³

² This claim is based on comparing average waiver cost per participant against the Medicare rate paid for institutional care.

³ This estimate is based on 1,028 persons on the waiting list for HCBS waivers in 2008, and 4,241 participants in 2006. For those with developmental disabilities the rate is higher (38%). This calculation was made using data from statehealthfacts.org. See also The Centers for Medicare & Medicaid Services (CMS) Form 372, December 2009, Table 6. "Medicaid 1915(c) Home and Community-Based Service Programs: Data Update."

GOAL 2

Increase Efficiency to Contain Costs

OBJECTIVE #3

Improve health information technology and database management

A third source of efficiency gains can come from investments in improved healthcare IT, health information exchange systems, and state databases. Electronic record keeping has the potential not only to reduce administrative costs but to improve the quality of care by better tracking medical data. Better database management can also help track the performance of healthcare and aid programs. Automation and technology upgrades would be particularly useful in connecting rural communities.

METRIC

A few studies have begun to quantify progress in this area—for instance, the share of physicians using electronic records—but little information is available that allows state-level comparisons on progress toward upgrading health information technology. Improvements in data collection and management, however, offer the chance to create new metrics of interest to state policymakers.

For example, collecting information from emergency rooms on wait times and reasons for patient visits would help assess the extent to which ERs in the state are being overburdened by the uninsured. Similarly, data on the share of patients initially held for psychological evaluation who are transferred into institutional settings would shed light on the capacity of the state's mental health resources.

STRATEGY

Subsidize the cost of technology adoption among smaller firms.

One of the biggest impediments slowing the adoption of electronic record keeping is the required upfront cost. For small firms, the time and cost of changing systems—including potential lost revenue—are significant relative to the benefits, which accrue over time. A recent study has shown that only about 30% of offices with 10 or fewer physicians have adopted electronic health records, while more than 46% of offices with 11 or more physicians have done so.¹ Given this problem of scale and the broader public benefits from electronic medical records, a case can be made for government to help facilitate the transition by subsidizing the cost for smaller providers. Concerns that such subsidies might be inefficient or politically driven are likely misplaced. In fact, private

for-profit hospitals are more likely to use electronic medical records than nonprofit and government-owned hospitals.

The 2009 federal stimulus bill provided funds to help states invest in health information technology and the health information exchange. Nevada state agencies have already begun planning in this area, but a commitment to continue the effort is important. The Nevada Office of Health Information Technology has initiated planning for the adoption of HIE and HIT in response to the Health Information Technology for Economic and Clinical Health Act, part of the recent federal stimulus effort.

¹ Hing, Hall and Ashman, "Use of Electronic Medical Records by Ambulatory Care Providers: United States, 2006," National Health Statistics Reports No. 22, Centers for Disease Control and Prevention, April 30, 2010.

GOAL 2

Increase Efficiency to Contain Costs

OBJECTIVE #4

Increase use of outside funding

In fiscal 2008, Nevada's Medicaid expenditures totaled \$455 million. The amount spent by the federal government on matching funds was \$684 million. On a per capita basis, Nevada receives less support from the federal government toward health insurance than other states. Partly this is a federal decision; Nevada is assigned a lower matching rate than many poorer states. But it also reflects a policy choice by Nevadans. By designing eligibility requirements and benefits for federally funded programs to minimize state expenditures, the state also minimizes the help it receives from Washington to address its citizens' health needs.

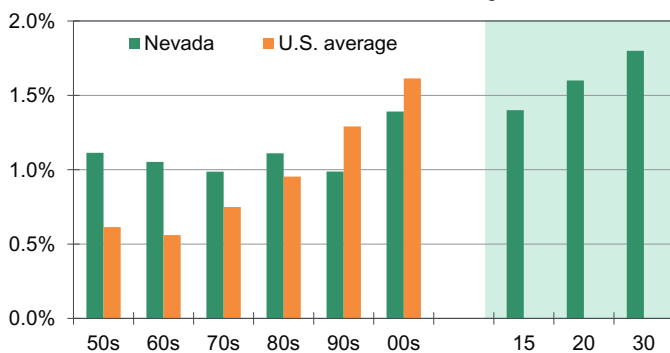
METRIC

Federal share of healthcare expenditures.

One benchmark goal would bring the state's per capita healthcare revenue from federal sources in line with national averages. Although this would require the commitment of additional state resources, the productive value of such spending would be high given the federal match. This goal may be realized in any case, since expansion of Medicaid eligibility is set to occur under federal healthcare legislation (see box on page 59).

Healthcare Revenue From Federal Sources

Federal health-related revenue, as a % of state general revenue



Source: Census Bureau

STRATEGIES

Expand enrollment in federally funded programs

Low participation rates in federal programs can be traced to both state policy and a lack of information among eligible households. Coordinating an increase in participation rates is further complicated by the structure of Nevada's public healthcare system. While most states centralize policymaking and financial responsibility for programs such as Medicaid at the state level, Nevada places statutory responsibility for indigent care with local communities.

Nevada's volatile regional economy and revenue system significantly inhibit participation in federal programs. Most federal aid is delivered through need-based healthcare and public assistance programs. As such, caseloads and spending requirements typically increase at the same time that state tax revenues decline, often leaving Nevada hard-pressed to provide its share of matching funds. Volatile state resources have been blamed for the failure to attract federal project grants, with researchers and aid workers reluctant to take

on project startup costs out of fear that funding will soon dry up.

Many Nevada households also never learn about federal programs for which they might be eligible. Outreach programs such as the "no wrong door" policy and universal aid applications have been successful in other states. Community-based outreach programs (for example, Trusted Partners) are particularly effective in educating households about available benefits.

Opportunities exist to receive revenue from federal sources beyond participation in matching programs. One example is the 2009 American Recovery and Reinvestment Act, which committed significant federal funds to support state budgets and to implement reforms and capital improvements. Relative to other states, Nevada received not only less federal Medicaid assistance, but also less for healthcare and other grants. Unlike many states, Nevada does not employ full-time grant writers to pursue federal funds, as many other states do. Such an effort could more than pay for itself.

GOAL 3

Build Healthy Communities

OBJECTIVE #1

Reduce the burden of poverty on families and communities.

Poverty remains a complex and multifaceted problem, with few easy remedies. What the state can address more directly and immediately is poverty's detrimental impact on social conditions. Foremost among these is hunger, and the fraction of Nevada households classified as food insecure is an important metric in assessing Nevada's progress in this area. In addition to the lack of food, lack of shelter is a major quality of life issue for Nevada. Even before its foreclosure crisis, the state had one of the highest rates of homelessness in the country, most of it concentrated in the south.

METRIC

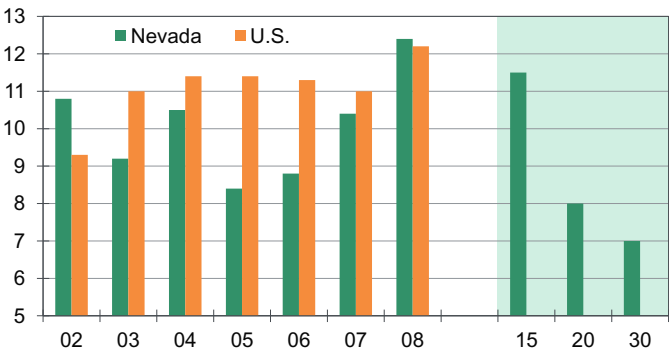
Share of families classified as food insecure.

The HP2010 benchmark for this metric is 12%. The reported rate of food insecurity in Nevada for 2008 exceeded this target slightly and may have risen further since then. By 2015, the state should strive to bring down the share of families classified as food insecure below 12% and progress thereafter toward a target of 7% by 2030.

The use of food stamps is also an important metric. Access to food stamps is important to those who need them, but their increased use can also signal a decline in overall well-being. The goal of reducing food stamps should therefore be pursued by reducing residents' need for them. However, because SNAP, the U.S. food stamp program, is fully funded by the federal government—with Nevada responsible only for associated administrative costs—utilization rates are also an important indicator of leveraging federal resources to lower state costs.

Hunger

Households classified as food insecure, % of total



Source: FDA

STRATEGIES

Provide opportunities for housing and strengthen social services.

Providing appropriate opportunities for housing and social services is critical. By one estimate, efforts to provide supportive housing environments in metropolitan areas produced a combined cost savings of more than 30% for state and local governments, with emergency room visits reduced by 56% and inpatient stays reduced to nearly zero.¹

Increase support for mental health professionals

Mental health can be a factor in social problems such as poverty and homelessness. One-third of Americans were reported in poor mental health in 2007; in Nevada this rate was significantly higher (39%), with the majority being women.² In 2002, more than 86,000 adults in Nevada were identified as having a serious mental illness.³

The true incidence of mental health problems is hard to measure precisely, as is the social cost. At the extreme, mental health problems can cause their sufferers to harm themselves or others. In 2008, Nevada's violent crime rate was the highest in the West, and almost 60% higher than the U.S. average.⁴

There is no evidence that these statistics are related to mental health, but that notion is supported by Nevada's high suicide rate. In 2007 the state's rate was 18.3 deaths per 100,000, well above the U.S. level of 11.3, and more than four times the national target of 4.3 set by HP2010.⁵ Although the

1 Nevada Disability Advocacy and Law Center, "Report on the Mental Health Crisis in Southern Nevada," February 2005.

2 Data taken from the Kaiser Family Foundation, statehealthfacts.org, based on unpublished data from the BRFSS, 2007.

3 National Mental Health Information Center, Substance Abuse and Mental Health Services Administration.

4 Table 4, *Crime in the United States-2008*, Federal Bureau of Investigation, U.S. Department of Justice, 2008.

5 The Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics Report Volume 58, Number 19, May 2010.

STRATEGIES

suicide rate is highest among those older than 75, it is of particular concern among the relatively young. Suicide is now among the top three causes of death for 15 to 34 year olds.⁶

More can and should be done to increase the capacity of community-based services to help individuals with mental illness and relieve the burden they put on local emergency rooms. According to a Nevada advocacy organization, 40% of those who checked into a local walk-in clinic left out of frustration without receiving services.⁷

⁶ Nevada Department of Health (see http://health.nv.gov/PDFs/HSPER/Snapshots/Snapshot_of_Suicide_2006_021010.pdf).

⁷ Nevada Disability Advocacy and Law Center, "Report on the Mental Health Crisis in Southern Nevada," February 2005.

GOAL 3

Build Healthy Communities

OBJECTIVE #2

Promote healthy lifestyles

Creating mechanisms to address larger social and economic forces such as homelessness, poverty and hunger is central to building strong communities. But it is equally important that individuals take responsibility for themselves and their communities. Lifestyles that emphasize healthy behavior not only improve the quality of life for Nevada's citizens, they are also a central factor driving future state healthcare spending. Rates of exercise, obesity, smoking and substance abuse are all important leading indicators of future health costs.

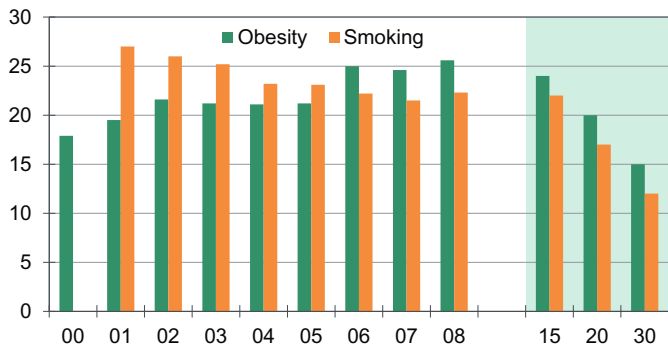
METRIC

The quality of Nevadans' health and the risks presented by their lifestyle choices are not easily captured in a single metric. The HP2010 report lays out targets for a number of indicators associated with poor future health, including obesity among adults and children, tobacco use, substance abuse, physical activity, sexual behavior, environmental quality, and violence.

The two indicators most commonly associated with chronic health problems are obesity and tobacco use. The HP2010 target for obesity is 15% for adults and 5% among children. The target rate for smokers among the adult population is 12%. Although smoking rates have trended downward in recent years, obesity is on the rise, and Nevada still has some way to go to meet national targets in either area. The state should focus initially on stabilizing the upward trend in obesity, holding current levels through 2015. It can then focus on making progress toward national target levels for smoking and obesity by 2020, meeting these goals by 2030.

Leading Health Indicators

% of Nevada adults with BMI > 30, and share who smoke tobacco



Sources: FDA, U.S. Centers for Disease Control and Prevention

STRATEGIES

Promote exercise and good diet through primary care and public education campaigns.

Although Nevada compares well with other states in some of these areas, attention is still required. The state has traditionally enjoyed a lower than average obesity rate, but its ranking among states fell from second to 20th between 1998 and 2008. Obesity among children is a particular concern, and Nevada's children appear in worse shape than its adults: 34% of those aged 10 to 17 qualified as obese in 2007, a higher proportion in this age group than in any other western state.¹ Intervening early in a child's life to address obesity concerns can help to sustain better physical and mental health through adulthood. Parents, doctors and state health and education officials should work together to develop a plan that addresses this issue in a coordinated and sensitive manner. Nevada has

no statewide plan to address childhood obesity, either with respect to nutrition or physical education.²

The share of smokers in the population has declined steadily over the past decade to 22%, yet this is significantly above the goal of 12% set in the HP2010 report. Substance abuse is also a problem for Nevadans. While they are no more likely than most Americans to drink alcohol, the rates of heavy drinking (6.9%) and binge drinking (17.5%) are higher in Nevada than in most states.³

Smoking and substance abuse often can be symptomatic of deeper behavioral health problems. As such, many of the efforts to expand primary care and address mental health resources discussed elsewhere in this report may be the best way to address these concerns as well.

1 From statehealthfacts.org, data source: Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children's Health, Data Resource Center for Child and Adolescent Health web site (www.nschdata.org).

2 The American Academy of Pediatrics (<http://aap.org/advocacy/statelegppt.pdf>, p29).

3 For males, heavy drinking is defined as two or more drinks per day, while binge drinking is defined as five or more drinks on one occasion (for females, the rate is one drink lower). Data come from the Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Focus On | Public Safety

Low crime rates and short response times by local public safety departments enhance residents' quality of life by providing a safe and secure living environment. Along with choosing locations that offer employment, leisure and educational opportunities, households seek out safe communities.

Nevada's public safety workers face unique challenges created by the state's vast geography as well as the large number of tourists. In response, local public safety departments have developed unique innovations and local expertise, much of which may be valuable to safety workers in other states. Nevada struggles with a higher than average crime rate, driven largely by property crime. Highway safety is another concern for the state, with a large number of road fatalities relative to national averages.

Nevada's crime rates present a mixed picture. The perception of safety is a critical factor for a community's quality of life. Residents and visitors need to feel secure where they live and travel.

Both violent crime and property crime are more common in Nevada than nationwide. This pattern stems in part from the high number of tourists visiting the state, and particularly Las Vegas, where crimes such as burglary, larceny, and motor vehicle theft occur more frequently than elsewhere.

While violent crimes are naturally of concern, the perception of quality of life is most affected by so-called Part II crimes.¹ These include property crimes as well as nuisance crimes such as graffiti, curfew violations and loitering—offenses often more visible to residents and visitors. Part II offenses are difficult to compare across states due to differences in definitions (See Chart 1). Property crimes are easier to compare among states and can be used as a proxy for Part II crimes

in general. Nevada's statewide property crime rate is just 7% higher than the U.S. average. Efforts to reduce this property crime rate would keep Nevada attractive for new residents, businesses and tourists.

The juvenile crime rate in Nevada is high. While the juvenile crime rate has fallen in recent years—in 2007 it was just 70% of its 2001 rate—the per capita rate still ranks well above the national average. Improved educational opportunities, along with economic growth and more job opportunities, will also influence crime rates.² Creating stronger community-based programs like Las Vegas' Youth at Risk prevention and rehabilitation program, to discourage youth crimes and to rehabilitate juvenile offenders, will also pay dividends for Nevada.

Many factors influence the overall crime rate, including the presence and visibility of police officers.³ In this regard, Nevada falls short. Its ratio of crimes per patrol officer exceeds the national average (see Chart 2). Although still above the U.S. figure, the number of crimes per patrol officer has improved in recent years. The improvement stems from the combination of a larger police force and a reduction in the total number of crimes in 2007 and 2008. While such progress is encouraging, the number of crimes per patrol officer remains high.

A nimble public safety force, able to efficiently and effectively communicate with other departments, will improve the overall response to crime and other emergencies. Communication improvements can stem from IT innovations and coordinated equipment upgrades among agencies. Ensuring

that public safety personnel who respond to crimes or accidents are able to effectively communicate and work together will improve outcomes.

While the size and effectiveness of police forces are leading factors in limiting crime rates, they are not the only influences. Private security personnel such as those working in Nevada's large casinos can help contain crime, as can efforts at the community level.⁴ A community commitment to preventing crimes and rehabilitating previous offenders to minimize the recidivism rate creates a safer environment for residents. The Opportunity for Probation with Enforcement (OPEN) Diversion Program is an example of how offenders on probation can be monitored to limit recidivism.⁵

Ensuring that the state has sufficient fire-fighting capacity is also important. Combining BLS Occupational Employment Statistics and Census population estimates data, Nevada's number of firefighters per capita falls short of the national average (see Chart 3). Although some of this disparity is made up by the use of overtime, the state should work to improve its ratio. Efficient response times and cooperation among agencies will increase residents' safety.

Road safety is also important for Nevada. Along with a sufficient infrastructure to safely handle vehicle traffic, quick response to highway accidents can help reduce fatalities. Traffic deaths occur in Nevada at noticeably higher rates per miles traveled than the U.S. average. Ensuring that roads are adequately marked and that emergency response teams

1 The FBI defines Part II offenses as simple assaults, forgery and counterfeiting, fraud, embezzlement; stolen property: buying, receiving, possessing, vandalism; weapons: carrying, possessing; prostitution and commercialized vice, sex offenses (except forcible rape, prostitution and commercialized vice), drug abuse violations, gambling, offenses against the family and children, driving under the influence, liquor laws, drunkenness, disorderly conduct, vagrancy, suspicion, curfew and loitering laws, runaways and all other offenses not specifically identified as Part I or Part II offenses, except traffic violations.

2 Lochner, Lance. "Education Policy and Crime." National Bureau of Economic Research, Working Paper No. 15894. 2010

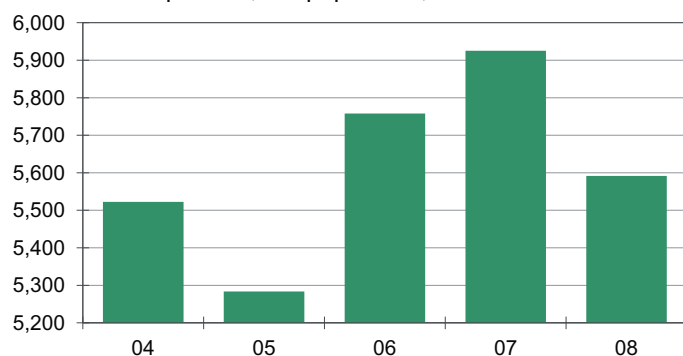
3 Klick, Jonathon and Alex Tabarrok. "Using Terror Alert Levels to Estimate the Effect of Police on Crime." The Journal of Law and Economics, Vol. 48. 2005

4 Cook, Philip J. "Assessing Urban Crime and Its Control: An Overview." National Bureau of Economic Research, Working Paper No. 13781. 2008

5 Horne, William, Assemblyman/Chairperson. "Advisory Commission on the Administration of Justice." The program works to mitigate probation revocation due to violations. Rather than revoking probation after violations, offenders are sent to Casa Grande Transitional Housing and participate in intervention programs to allow them to then continue with their probation. The program is designed give violators a second chance while alleviating crowding in the prison system.

Chart 1: Property and Nuisance Crimes

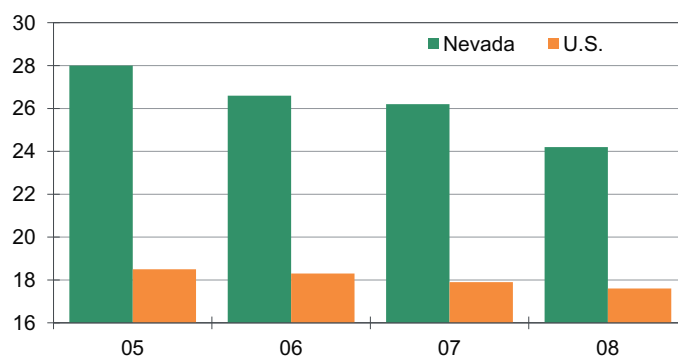
Part II crimes per 100,000 population, Nevada



Sources: FBI, Moody's Analytics

Chart 2: Nevada's Coverage Falls Behind

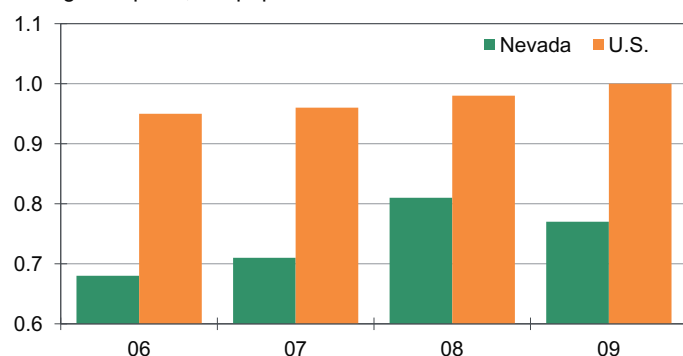
Crimes per patrol officers



Sources: FBI, BLS, Moody's Analytics

Chart 3: Firefighters Per Capita Fall Short

Firefighters per 1,000 population



Sources: State of Nevada Department of Public Safety, BLS, Moody's Analytics

abuse among those groups.⁷ Reduction of substance abuse will also discourage associated crimes.

Public safety encompasses not only crime prevention, but also incarceration and rehabilitation. Effective public safety programs link crime prevention, criminal justice

and corrections. Rehabilitation can complement active crime prevention by reducing recidivism rates and allowing past offenders to re-enter society.⁸

Funding is a concern for all public safety programs, with police, firefighting and ambulance services accounting for large portions of state and local government budgets. Assuring quality services and coverage within the scope of available fiscal resources is as important as expanding public safety operations.

Goals and strategies for other quality of life areas addressed in this report can also contribute to better public safety. In particular, increased educational attainment, school enrollment and educational quality are fac-

tors that can reduce crime,⁹ affecting not only the juvenile crime rate but also the rate among adults as those children mature. Education, therefore, not only improves quality of life directly, through greater employment and earnings potential, but also has a positive influence on the general quality of life.

In addition to all its local crime and safety concerns, Nevada must be concerned with terrorism and other external threats. Ensuring that the Department of Homeland Security is properly involved in the state's safety programs is therefore a necessary focus for Nevada. Fusion centers, which coordinate among federal, state and local agencies, are a way for Nevada to encourage federal involvement and improve readiness within the state.

A Vision of Public Safety

While the state's public safety departments have dealt with numerous challenges to provide quality service to residents and visitors, statistics show room for improvement. The Nevada Vision Stakeholder Group has therefore, set a broad goal of improving public safety within the state. Several objectives will help Nevada advance that goal. A safer community will improve the quality of life for both residents and visitors. Reducing Part II crimes is important, since property crimes, graffiti, loitering, and other nuisance violations can significantly hurt the perception of a community's quality of life.

are properly trained and staffed can help reduce fatal traffic injuries. The state can also offer traffic safety courses and promote driver safety generally.

Substance abuse is also a public safety concern for the state. In Nevada, the rate of illicit drug use is highest among those aged 18 to 25. The rate of illicit drug use among the youngest age group, those aged 12 to 17, and those 26 and over has held fairly steady in recent years.

Reducing maternal substance abuse improves the outlook for children, highlighting the importance of prevention and rehabilitation for those struggling with drug addiction.⁶ Providing education about drug abuse prevention and creating protection programs for high-risk groups can reduce substance

6 Frank, Richard G. and Ellen Meara. "The Effect of Maternal Depression and Substance Abuse on Child Human Capital Development." National Bureau of Economic Research, Working Paper No. 15314. 2009

7 Hawkins, J. David, Michael W. Arthur and Richard F. Catalano. "Preventing Substance Abuse." Crime and Justice, 1995.

8 Di Tella, Rafael and Ernesto Schargrodsy. "Criminal Recidivism after Prison and Electronic Monitoring." National Bureau of Economic Research, Working Paper No. 15602. 2009

9 Lochner, Lance. "Education Policy and Crime." National Bureau of Economic Research, Working Paper No. 15894. 2010

GOAL	OBJECTIVE	METRIC	STRATEGIES
Improve the level of public safety	1. Promote low-crime environment	Property crime rate	<ul style="list-style-type: none"> » Expand crime prevention and probation programs » Improve personnel management for efficiency and effectiveness » Encourage and enable cooperation among public service agencies
	2. Discourage juvenile crime	Juvenile crime rate	<ul style="list-style-type: none"> » Provide additional support for the juvenile justice system » Expand juvenile crime prevention programs and work to rehabilitate offenders
	3. Foster safer roadways	Fatal traffic injuries per 100 million miles traveled	<ul style="list-style-type: none"> » Encourage agencies to work in cooperation in response to roadway accidents
	4. Reduce substance abuse	Illicit drug use rate	<ul style="list-style-type: none"> » Encourage agencies to work jointly to reduce substance abuse » Expand rehabilitation options for those arrested for drug use
	5. Export Nevada's public safety and firefighting knowledge		<ul style="list-style-type: none"> » Establish a national fire academy

GOAL 1

Improve the level of public safety

OBJECTIVE #1

Promote a low-crime environment

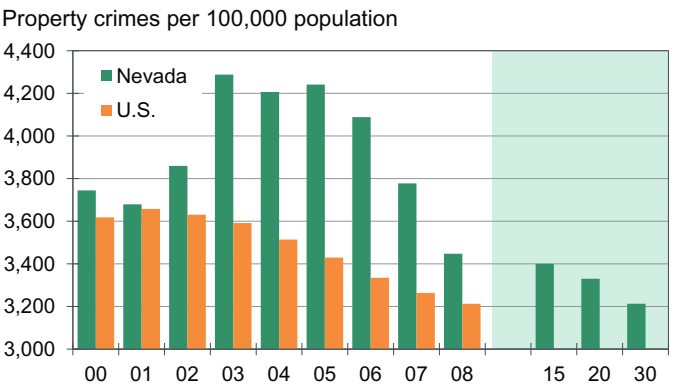
Part II crimes are highly visible to both residents and tourists. Reducing the incidence of these nuisance crimes will make Nevadans feel safer and improve the social and civic environment. Such efforts should take the form of both crime prevention and rehabilitation for prior offenders. Fires, whether arson or accidental, diminish Nevadans' safety at home and at work. Having an efficient and effective fire department can help minimize injury and losses from fire.

METRIC

Property crime rate

Reported by the Federal Bureau of Investigation in its Uniform Crime Reporting program, property crimes include burglary, larceny theft, motor vehicle theft, and arson. Although the category does not exactly match Part II crime, it is a good proxy because it captures nonviolent offenses. The property crime rate for the Mountain West excluding Nevada exceeds the state's average, so the state's goals are focused on the national figure. Nevada should aim to halve its gap with the nation by 2020 and to meet the current U.S. average by 2030.

Promote Low-Crime Environment



Sources: Census Bureau, Federal Bureau of Investigation, Moody's Analytics

STRATEGIES

Expand crime prevention and probation programs.

Crime prevention should be the first aim of community-based programs, but rehabilitation is also a necessary piece of the puzzle. The state should work to take advantage of federal funding, through either one-time grants or ongoing sources, to support prevention programs. Grant-writing expertise would greatly benefit these efforts.

The state should divert probation violators from the prison system when possible. The Opportunity for Probation with Enforcement in Nevada Diversion Program at Casa Grande Transitional Center is an example of a program that works to prevent probation violators from re-entering the prison system.

One unique aspect of Nevada's rehabilitation program is the way cases are assigned at the state level. Staffing is therefore a concern for justice system programs. The state needs to ensure an appropriate level of personnel.

Improve personnel management for efficiency and effectiveness.

One concern is the use of overtime to meet public safety staffing needs. While this can help save costs in the areas of benefits, training and personnel administration, it can also raise issues of effectiveness. The state needs to assist agencies in finding the proper balance between the use of overtime hours and additional hiring.

High staff turnover rates in the Department of Corrections could be addressed through succession planning and staff development programs. Also important are infrastructure issues such as aging correctional facilities. Public safety agencies should also be aware of opportunities to leverage common resources: For example, multiple jurisdictions could share hazmat response units.

STRATEGIES (Continued)

Encourage and enable cooperation among public service agencies.

Wherever feasible, the state should promote cooperation across agencies, particularly in overlapping jurisdictions, as well as across functions such as police and firefighting. Programs should use a bottom-up approach, with local departments taking the initiative. At the same time, the state can work from the top down to provide a framework for collaboration. The state can promote and encourage, without coercing.

Since training and preparation are critical to firefighting, it is important to have a properly prepared workforce. When residents call for help, departments need to ensure the response is appropriate. Joint training efforts not only improve departments' capabilities but also foster closer working relationships.

Departments can also work jointly on supply acquisition. Fire departments' equipment

needs are similar, and a joint facility could streamline ordering and purchasing. This could be modeled on the Army's approach to centralized supply. Coordinating the use of technology across agencies is another key strategy for improving the compatibility of communication and database systems, enabling efficient cooperation among public safety agencies.

One example of collaboration in this area is the Department of Homeland Security's fusion centers. Developed to aid in counterterrorism, these promote information sharing among federal, state and local government departments as well as private agencies. Nevada has three such centers.

The state's public safety departments can also seek federal grants to aid in training and resource development. Dedicated grant writers would allow departments to better use funding opportunities.

GOAL 1

Improve the level of public safety

OBJECTIVE #2

Discourage juvenile crime

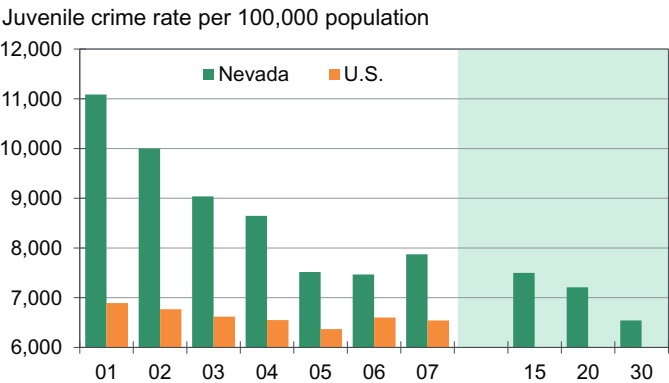
Targeting juvenile crime would improve public safety and help lower future crime rates.

METRIC

Juvenile crime rate

Reported by the Federal Bureau of Investigation in its Uniform Crime Reporting program, the juvenile crime rate includes all incidents in which someone under age 18 is arrested, cited or summoned for an offense. Juvenile crime rates for other states in the Mountain West generally exceed Nevada's, so the goals are to extend recent improvement through 2015, halve the gap with the nation by 2020, and meet the current U.S. average by 2030.

Discourage Juvenile Crime



Sources: Census Bureau, Federal Bureau of Investigation

STRATEGIES

Provide additional support for the juvenile justice system.

Funding is a concern for public safety, and the juvenile justice system is no exception. Beyond identifying stable funding sources, whether federal, state or local, Nevada can encourage support for the juvenile justice system. For juveniles, county-level probation and youth parole programs such as the Juvenile Detention Alternatives Initiative¹ should be strengthened. To discourage repeat offenders, Nevada should focus on intermediate sanctions and create additional alternatives to incarceration.

Other efforts could include improved data collection to identify effective prevention or rehabilitation programs. Data collection and database management offer a chance to de-

velop partnerships with private entities or with the state university system's various computing facilities such as UNLV's super-computing facilities.

Expand juvenile crime prevention programs and work to rehabilitate offenders.

Particularly for youth, prevention goes hand in hand with outreach. Communities have an opportunity to serve children who would benefit from intervention. Programs can be focused on education such as after-school tutoring, but they should also include an avenue for reintegrating previous offenders into school systems and society.

An existing program in Las Vegas, Partnership for Youth at Risk, could be expanded or used as a model for other jurisdictions. The month-long program exposes participants to the justice system, having them meet inmates, visit a burn unit, visit a psychologist, and participate in programs with their parents. The program is funded through grants, highlighting the need to build grant-writing expertise.

¹ Active in Washoe and Clark counties, the Juvenile Detention Alternatives Initiative is funded by the Annie E. Casey Foundation. The program attempts to eliminate inappropriate or unnecessary detention, minimize re-arrest and failure-to-appear rates, ensure appropriate conditions of confinement, support public funding of successful reforms, and reduce racial and ethnic disparities. More information on the program is available at <http://www.aecf.org/MajorInitiatives/JuvenileDetentionAlternativesInitiative.aspx>.

GOAL 1

Improve the level of public safety

OBJECTIVE #3

Foster safer roadways

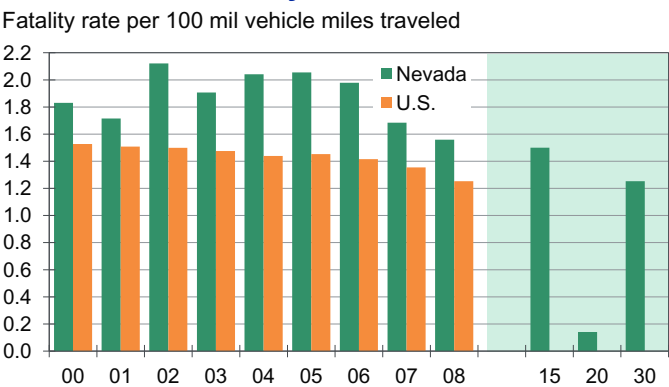
Residents' safety needs extend beyond homes, schools and workplaces to the state's road system.

METRIC

Fatal traffic injuries per 100 million miles traveled.

Combining Federal Highway Administration data on traffic fatalities and total miles traveled, this metric gauges the safety of the state's roads. It has some limitations; the measure does not capture the overall rate of accidents either with or without injuries or pedestrian fatalities. It also includes highway fatalities that might not have been preventable with a faster response time. The goals are to extend recent improvement through 2015, halve the gap with the nation by 2020, and meet the current U.S. average by 2030.

Foster Safer Roadways



Sources: Federal Highway Administration, Moody's Analytics

STRATEGY

Encourage agencies to work in cooperation in response to roadway accidents.

Coordinating traffic accident responses requires communication among public safety agencies. Emergency response training offers another chance for agencies to collaborate. Joint response exercises will not only help each department improve but will also foster closer relationships that can streamline accident response.

GOAL 1

Improve the level of public safety

OBJECTIVE #4

Reduce substance abuse

Reducing the incidence of substance abuse will lower crime rates, improve public health, and lessen demand for state-provided social services.

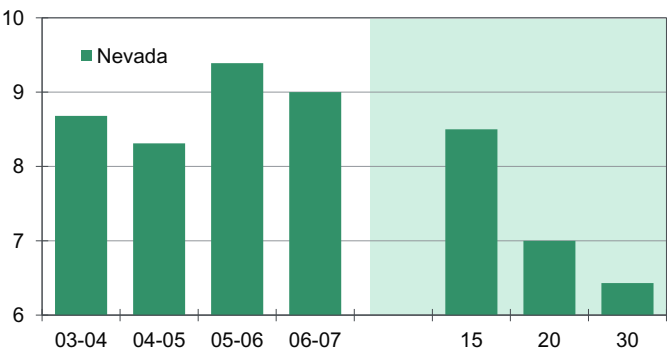
METRIC

Illicit drug use rate

Data from the Substance Abuse and Mental Health Services Administration's survey show the level of substance abuse in Nevada. Lowering that level will improve the quality of life for families and communities as it reduces the state's crime rate. Because Utah's substance abuse rate is the lowest within the Mountain West, Nevada's goals focus on narrowing its gap with Utah. The goals are to extend recent improvement through 2015, halve the gap with Utah by 2020, and meet that state's current average by 2030.

Minimize Substance Abuse

Illicit drug use in the past month, %, 12 yrs and older



Sources: SAMHSA, Moody's Analytics

STRATEGIES

Encourage agencies to work jointly to reduce substance abuse.

Cooperative efforts on substance abuse should extend beyond public safety agencies. The aid of social work, health, and children and family services agencies is critical for both prevention and rehabilitation. Joint communication between agencies and the families of substance abusers can also be important. Interagency task forces can be deployed to combat substance abuse as well as drug trafficking within the state and externally.

Expand rehabilitation options for those arrested for drug use.

Communities and agencies can work together to aid those struggling with addiction and their families. Ensuring access to rehabilitation programs will pay dividends in public safety. Reintegrating individuals into their communities can also be positive for workforce quality. Providing youth rehabilitation options will prevent later substance abuse problems and mitigate criminal activity. Community-based substance abuse programs could benefit from cooperation among federal, state and private groups and the creation of public-private partnerships. As in many of the strategies discussed in this report, grant-writing expertise would be beneficial.

GOAL 1

Improve the level of public safety

OBJECTIVE #5

Export Nevada's public safety and firefighting knowledge

Nevada's public safety workers face unique challenges stemming from the state's vast geography, as well as its large inflows of tourists. The state could leverage this knowledge through an interstate academy.

METRIC

None.

STRATEGY

Establish a national fire academy.

The West could benefit from an alternative to the nation's only National Fire Academy, which is based in Emmitsburg MD. Establishing such a program in Nevada would serve this need while supporting the state's economy. A public safety academy would bring additional visitors, generating revenue at the facility and nearby. It would also create opportunities for Nevada's public safety workers to train and advance their capabilities. The Nevada Vision Stakeholder Group feels that locations in Carlin or in the McCarran Airport area could serve this function.

Appendix | The Moody's Analytics State Model System

Moody's Analytics maintains economic forecast models that are updated on a monthly basis for all 50 states plus the District of Columbia, as well as a U.S. macroeconomic model and models for all 384 metropolitan areas.

The Moody's Analytics economic and demographic projections for U.S. states are produced each month with a quarterly frequency large-scale simultaneous-equation econometric model system. The state model system is designed to reflect each state's comparative economic advantage to fully model the unique economic structure of each state, and to account for the effects of macroeconomic assumptions on the individual state economies. Comparative advantages are estimated through relative business costs and demographic characteristics. State industrial structure is captured through detailed specifications of output and employment by industry.

The state model system is fundamentally an output-based industry model that is simultaneously interactive with a demographic model.

Simultaneity in the models is controlled by the Gauss-Seidel algorithm, which iterates toward a stable solution as determined by preselected convergence criteria. In practice, the system is very stable—requiring a minimal number of iterations at standard convergence criteria.

In the solution process, output influences employment, employment influences migration, migration influences population, population creates demand for output, and so on. Key factors that determine relative state performance within this construct are industrial mix, labor costs, energy costs, tax rates, net migration, and other demographic factors.

The major benefit of the output-based structure of the model is that it allows for the inclusion of cost-of-doing business variables and productivity variables as key determinants of output and employment.

The ability to model the location of industrial output and its subsequent impact on establishment employment is a key feature of this system. It enhances the quality of state output forecasts and makes for a very flexible platform for policy analysis.

Personal income is the link between state employment and demand for consumer goods and services. Wage and salary income makes up the majority of personal income and is directly related to employment levels. In the state models system, wage and salary income is the product of total employment and the effective wage rate. The historical effective wage rate is calculated as the total wage bill divided by total employment; it is forecast as a function of U.S. average hourly earnings and state and U.S. productivity.

About Moody's Analytics

Moody's Analytics is a leading independent provider of economic research, analysis and data. As a well-recognized source of proprietary information on national and regional economies, industries, financial markets, and credit risk, we support strategic planning, product and sales forecasting, risk and sensitivity management, and investment research. Our clients include multinational corporations, governments at all levels, central banks, retailers, mutual funds, financial institutions, utilities, residential and commercial real estate firms, insurance companies, and professional investors.

With one of the largest assembled financial, economic and demographic databases, Moody's Analytics helps companies assess what trends in consumer credit and behavior, mortgage markets, population, income, and property prices will mean for their business. Our web and print periodicals and special publications cover every U.S. state and metropolitan area; countries throughout Europe, Asia and the Americas; and the world's major cities, plus the U.S. housing market and 58 other industries. We also provide up-to-the-minute reporting and analysis on the world's major economies on our real-time Dismal Scientist web site from our offices in the U.S., the United Kingdom, and Australia. Our staff of more than 50 economists, a third of whom hold PhD's, offers wide expertise in regional economics, public finance, credit risk and sensitivity analysis, pricing, and macro and financial forecasting.

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