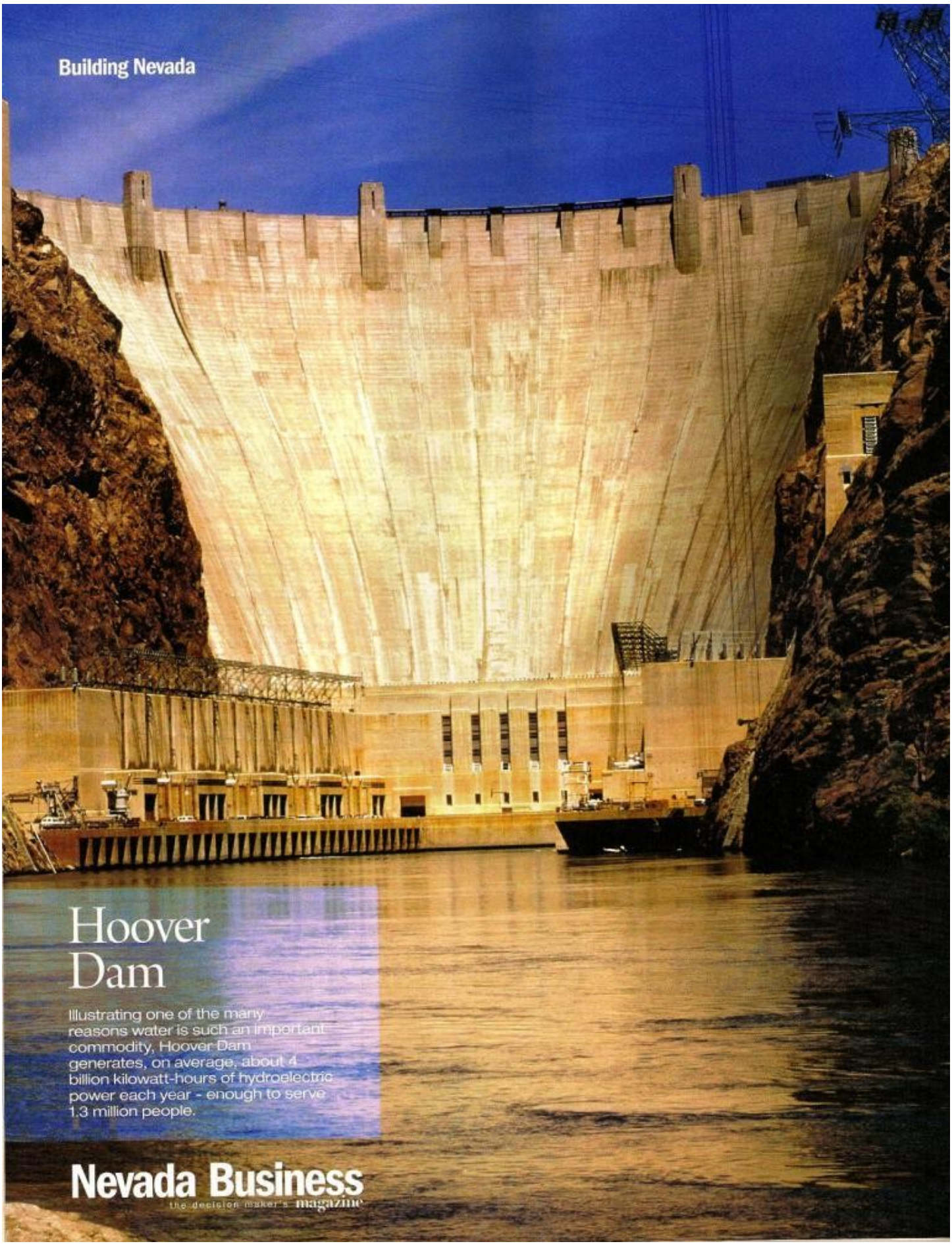


Hoover Dam

Illustrating one of the many reasons water is such an important commodity, Hoover Dam generates, on average, about 4 billion kilowatt-hours of hydroelectric power each year - enough to serve 1.3 million people.

Nevada Business
the decision maker's magazine

KEEPING OUR HEADS ABOVE WATER

By Susan M. Botich

Nevada's need to ensure quality and availability of nature's sustaining resource.

Most of us are used to having as much water as we need. We simply turn on the tap and out flows the water. However, those who work within the agencies overseeing water allocation must deal with the complex issues of what resources are available, how much is available and the price tag on ensuring that the supply meets the demand.

Many Nevadans are concerned with the possibility that, if appropriate steps are not taken now, water needs in certain Nevada communities may outweigh water availability. That is why steps are currently being taken to ensure the reliability and continued quality of the water here in Nevada.

A Little History About Nevada Water

Southern Nevada gets roughly 90 percent of its water from the Colorado River. The remaining supply comes from in-state water resources.

"Although many people are under the misconception that because the river runs through our backyard, it somehow belongs to Nevada," said Southern Nevada Water Authority (SNWA) General Manager Pat Mulroy. "The reality is that we are entitled to less than 2 percent of its allocated flows. The agreements that govern the Colorado River are nearly 100 years old now, and there is no realistic opportunity to reallocate the river. Instead, we must focus our efforts on maximizing the flexibility with which the system is operated."

In addition to this challenge, five years ago, Nevada was already five years into the most severe drought in the Colorado River's history, according to Mulroy.

"The Southern Nevada Water Authority and the local water purveyors had already enacted one of the nation's most comprehensive and aggressive water conservation programs," Mulroy said. "The results had already demonstrated the effectiveness of those efforts. Last year, our community consumed 32 billion gallons less water than in 2002, despite adding 400,000 residents during that span."

However, new measures are needed to be put into place in order to properly ensure water availability and quality to Southern Nevada.

The Lake Mead third intake project

Nevada accesses the Colorado River's water via Lake Mead. Up until recently, Nevada has had two water intakes at the lake. A third intake has been approved and is currently under construction.

THE PROPHECY ...

And you will hear of WARS and RUMORS OF WARS. See that you are not alarmed, for this MUST TAKE PLACE, but the end is not yet. For NATION WILL RISE AGAINST NATION, and kingdom against kingdom, and there will be FAMINES and EARTHQUAKES in various places. All these are BUT THE BEGINNING ...

Matthew 24: 5-8

Pat Mulroy
Southern Nevada Water Authority

"The purpose of the third intake project is to secure water flow into the Las Vegas Valley," said Guy Hobbs, managing director of Hobbs, Ong & Associates, Inc., an independent financial advisory firm contracted by SNWA. "This third intake would ensure reliability as well as quality of the water."

Why would Nevada's water quality from Lake Mead be in question?

"Most people don't think much about the safety of drinking water; for them, it's a given," said Mulroy. "The reality is that a lot of very talented people work hard to ensure that water delivered from our treatment facilities surpasses state and federal health standards. Most contaminants in lakes are near the surface, for a variety of reasons. If you have a fixed intake, as the lake level drops, the water coming through the intake becomes less pure. This can pose a significant challenge to meeting drinking water standards. With the third intake in place, we are assured the ability to draw from the deepest, purest part of the lake."

The other benefit has to do with ensuring a stable atmosphere for businesses considering investing in commercial enterprises in Nevada.

"One of the things we want to do is express confidence to those investing in Nevada," said Hobbs. "It's important they know that we will have reliable water of a good quality. This has a direct impact on the state in regard to businesses working here, as well as tourism."

Nevada's In-state Water Project Proposal

There has been much controversy over a proposed in-state water project, commonly referred to as the "pipeline project," which would utilize water from areas in rural Nevada to Southern Nevada. The analysis for the project has been completed. Now it's up to the Nevada State Engineer's office to decide whether the information gathered will warrant a go-ahead.

"We had, five years ago—and still have to this day, despite last winter's strong snow-pack—grave concerns about the reliability of the Colorado River as a water supply," said Mulroy. "To help insulate our community from a potentially catastrophic shortage, as well as to secure another permanent supply to ultimately replace some temporary resources we've acquired, the SNWA went to hearing before the Nevada State Engineer on long-held applications for renewable, unused groundwater supplies in east-central Nevada."

The in-state water project's projected cost is another hot topic. Figures discussed have varied from approximately $3 billion to $15 billion. The explanation for the seeming disparity is actually quite simple, according to Mulroy.

"There is actually only one estimate but some people have misunderstood and, in some cases, intentionally misconstrued the project's cost," said Mulroy. "The build-it-today cost of the groundwater project is, and has consistently been, $3.2 billion. However, we are not going to build it today. In fact, we cannot precisely say when, in the coming decades, we will need to begin construction. Therefore, in an exercise for the Nevada State Engineer's hearings, we had an external analyst estimate how much the project would likely cost if we deferred construction for two-plus decades and stretched it over an even longer period. Using inflationary assumptions, the cost is projected to increase over time to approximately $7 billion. Using the same time-frame and construction schedule assumptions and presuming that the project is financed entirely with bonds, the cost of capital would be approximately $8 billion, making the sum of all payments approximately $15 billion."

The Cycle of Life
Water Turns the Wheel

"The Nevada economic engine is Southern Nevada," said Hobbs. "Making sure that economic engine is finely tuned and reliable is extremely important."

Having enough water is vital to keeping Southern Nevada an attractive place of business and, therefore, a viable future for investors, according to Mulroy.

"One of the questions we are asked is why, with very modest economic activity occurring, are we continuing to exert ourselves identifying and developing water resources for this community," said Mulroy. "The short answer is that we are in the business of planning half a century in advance; we're not thinking about next quarter or next year, we're thinking about the decades to come."

Independent economic analyses have consistently shown that the economy of Nevada will eventually recover, according to Mulroy. However, one of the preconditions for that recovery is the availability of a reliable water supply.

"A major corporation considering an investment of hundreds of millions or even billions of dollars is going to look very carefully at any variables that could affect their investment," Mulroy said.

Mark Foree
Truckee Meadows
Water Authority (TMWA)

Another potential added benefit to the implementation of the proposed in-state water project would be employment.

"Nevada has been most hard-hit with the current economic downturn," Hobbs said. "Of that, construction was hit the hardest – it really has been decimated. Any project that would support that amount of employment necessary would be good for the overall economy."

Mulroy agreed. "During the extended construction period, the project would directly create private-sector jobs," said Mulroy. "Those, in turn, would create additional employment opportunities as those workers need housing, goods and services.

Northern & Southern Nevada
One State, Two Perspectives

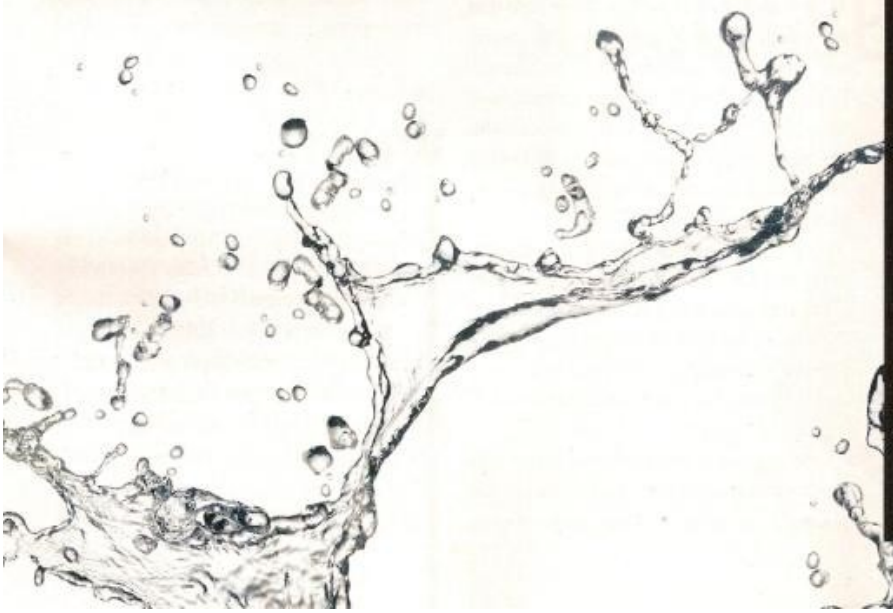
Though Northern Nevada may be economically tied to Southern Nevada, it is not dependent on its water supply. Truckee Meadows Water Authority (TMWA) General Manager Mark Foree offers his perspective on the subject.

"In the Reno-Sparks area, about 85 percent of the community's water supply comes from Lake Tahoe and the Truckee River system," Foree said. "The remainder comes from groundwater wells."

Though the federal government is not closely involved in the water issue of Southern Nevada, it does play a role in Northern Nevada.

"The federal government is involved in allocation of water in the Reno-Sparks area," Foree explained. "The Federal Watermaster administers allocation of waters of the Truckee River in accordance with federal decrees."

What Northern and Southern Nevada share is how the nation's economic downturn has affected both communities. Over the last five years, the Reno-Sparks area has gone from working



hard to keep up with growth to working through significant financial challenges due, in large part, to the national and local economic situation, according to Foree.

"Water use has dropped significantly over the past four years, which has impacted revenues," Foree said. "Very focused cost-reduction measures have been required to maintain financial stability while continuing to produce and deliver high quality water and service to our customers."

Regarding funding, Foree added, "We have seen some decrease in federal funding in the past few years. Though, in our budget process, we don't rely on federal funding to implement our programs."

TMWA continues to work toward implementation of the Truckee River Operating Agreement (TROA).

"This agreement sets forth a new way of operating the Truckee River system that will result in many benefits to water users including increased upstream drought storage for the Reno-Sparks area (municipal water supply), benefits for endangered (fish) species, benefits for recreation, and enhanced water conservation."

Jason King
Nevada State Engineer

TROA is progressing as expected, according to Foree. "While there are still legal challenges to overcome, we expect that those things will be resolved within the next few years," Foree said.

Though water consumption has decreased significantly over the past four years, water demands are at or near the bottom right now, according to Foree.

"We expect slow, measured increases in demand over the next few years as the economy improves," he said.

Making a Positive Difference

In regard to how residents and businesses may help with the issue of water availability versus consumption, Foree expressed a positive outlook.

"We have a water conservation plan that focuses on promoting responsible water use including assigned day watering," Foree said. "Since these programs have been in place for many years, our customers have become very good at following assigned day watering requirements and using water responsibly."

In addition to that, TMWA looks beyond just the immediate need. "We plan for a nine-year drought, which equates to the longest drought on record (eight years) plus an additional year," Foree said. "As a result of that, we don't anticipate any water supply issues."

One area that the business sector can make greater contributions is with the application of water-efficient technologies, according to Mulroy. Appreciating the reluctance to make those kinds of investments in the current economic climate, SNWA has a customizable incentive program geared at non-landscape water uses such as HVAC equipment and indoor fixtures that can help defray those costs.

"Ultimately, the business will recoup its investment, and then some, through decreased water bills," Mulroy said.

Nevada State Engineer Jason King further puts it all in perspective. "Simply put, the problem has been that we are the most arid state (in the nation) and we were the fastest growing state for decades and water availability is limited," King said. "We need to be frugal with all of our water and we need to be innovative and creative on how we maximize the beneficial use of what little water we do have. Because the majority of the issues we face relate to groundwater availability, and the fact that there are great uncertainties related to groundwater availability, we need to proceed cautiously and need to be able to get our arms around 3M plans (Monitoring, Management, and Mitigation) and their reliability and appropriateness. We need to increase the degree of flexibility in water management and need to integrate that into our process. We need to continue to collect data and learn more about climate change unknowns."

SAY WHAT?

According to the 2011 America's Health Rankings, Nevada is up five spots in rankings from 47th in 2010 to 42nd compared to the health of other states. The Silver State has a lower prevalence of obesity, infectious disease and preventable hospitalizations compared to the rest of the nation.