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## Water Supply at Risk, Las Vegas Considers \$650 Million Insurance Policy

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*A new pumping station would draw water from the bottom of a shrinking Lake Mead.*



Photo © J. Carl Ganter / Circle of Blue

The water agency that serves Las Vegas is considering a \$US 650 million pumping station that will protect its ability to draw water from Lake Mead, even as the big reservoir shrinks. [Click image to enlarge.](#)

**By Brett Walton**  
**Circle of Blue**

The price of reliable water in the American desert – and the residual costs of steady demand under drying conditions – keeps rising.

On Wednesday, the board of directors of the Southern Nevada Water Authority (SNWA), the regional wholesaler that serves Las Vegas, will consider endorsing the construction of a \$US 650 million pumping station that will draw water from the deepest depths of Lake Mead, the Colorado River reservoir that provides 90 percent of Sin City's water supply.

A 21-member advisory committee, appointed by the board, recommended last month that the pumping station be designed and constructed "[within the swiftest feasible timeframe.](#)" Without it, the committee argued, the oasis city of 600,000 residents — and 40 million annual visitors — runs an unacceptably high risk of being cut off from its primary water source if Lake Mead continues to drop.

The water authority's two existing intakes will be exposed to desert air if the lake's elevation

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### **UPDATE: Unanimous Approval**

The board of directors unanimously approved the pumping station and seven other advisory committee recommendations, including adding a fixed monthly fee to water bills to pay for the \$US 650 million project.

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drops below 1,000 feet above sea level. A third intake is currently under construction, but it would require a separate pumping station — like the one that the committee recommended — to operate at the lowest water levels, those below the 1,000-foot mark. The surface of the lake now stands at 1,084 feet, having plummeted 130 feet over the last 14 years, the driest period on record for the Colorado River Basin.

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“*This project is all about the security of our water supply.*”

—Scott Huntley, spokesman  
Southern Nevada Water Authority

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It could take five years to design and construct such a pumping station, according to SNWA spokesman Scott Huntley.

“This project is all about the security of our water supply,” Huntley told Circle of Blue. “We’re looking at, depending on the models, a 10 to 25 percent chance that Lake Mead could fall below 1,000 feet in the next 10 years. The committee deemed that too much of a risk to take.”

Because of the committee’s unanimous endorsement, the board is likely to approve the pumping station, according to Mary Beth Scow, board chairwoman.

“It’s an absolute necessity,” Scow told Circle of Blue. “With the lake receding as it has, to keep the southern Nevada economy strong, we need total assurance that we’ll have water. And the pumping station will do that.”

## Drought Forces Decisions

With increasing frequency, cities in the arid American West are realizing [the vulnerability of their water supplies](#). The Lake Mead pumping station is the latest example of emergency infrastructure and new partnerships that metropolitan areas are pursuing to avert a crisis:

- SNWA is one of four large utilities in the Colorado River Basin that will work with the federal Bureau of Reclamation on water-conservation projects that increase water storage in Lake Mead to avoid [a first-ever shortage](#) in the Basin. The SNWA board is expected tomorrow to approve its participation in the [\\$US 11 million project](#) that was announced this summer.
- The four states in the Upper Colorado River Basin developed [a similar conservation program](#) this spring to prop up Lake Powell, a large reservoir that is located upstream of Lake Mead.
- Phoenix and Tucson, often ideological opposites, agreed in September [to coordinate water deliveries](#) and use each other’s canals and groundwater storage basins to maximize their capacity to use Colorado River water.
- San Diego, which is not in the Basin but still uses Colorado River water, will soon buy water closer to home — from the largest desalination plant in the Western Hemisphere, under construction in nearby Carlsbad. Opening next year, the \$US 1 billion project will reduce San Diego’s reliance on water imported from the Colorado and Northern California.
- Las Vegas, too, will complete an expensive capital project next year. SNWA is building a third pipe to draw water from [Lake Mead](#). The \$US 817 million, three-mile-long conduit will poke up from the deepest parts of the lake, at an elevation of 860 feet. But to function at such dismal water levels — when the lake is so low that it essentially reverts to being a river again — the intake will need the new pumping station. The two existing pump houses operate only to elevation of 1,000 feet.

## Building a Third Pump

The third intake was originally designed with a connected pumping station. But the recession in 2008 put the brakes on new construction in Las Vegas and whittled to the bone the fees that SNWA collected from new housing developments. Used for water infrastructure projects, connection fees fell from \$US 188 million in 2005 to \$US 3 million in 2008.

Shelved as a budget-cutting measure six years ago, the pumping station is now back on the drawing board because of the continuation of the drought, said Huntley, the SNWA spokesman. Combined with the third intake, the pumping station will allow SNWA to draw water even if Lake Mead falls below the 895-foot “dead pool,” the elevation below which the dam cannot release water downstream.

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—Mary Beth Scow, board chairwoman  
Southern Nevada Water Authority

Bureau of Reclamation computer models show a 10 percent chance of Lake Mead falling below 1,000 feet — the elevation at which SNWA’s two current pumping stations are rendered useless — by 2025. But those models look only at river flows and precipitation observed in 119 years of record keeping. Factor in the drier conditions that are

expected in the Southwest as the planet warms and the chance of Lake Mead dipping below that critical level reaches 25 percent by 2020. Thus the advisory committee’s urgency.

The committee suggested that SNWA pay for the project by adding a fixed fee to utility water bills. The fee, phased in over three years, would increase a typical residential water bill by \$US 4.81 per month.

The board of directors is not bound by the committee’s recommendations. Huntley said that the board could adopt certain items and reject others.

The committee also recommended that SNWA continue pursuing [a highly contentious pipeline](#) to groundwater basins in central Nevada as a water-supply option. The pipeline has been mired in legal battles for more than a decade.

If the board does approve the pumping station, the facility could be ready by the end of the decade. It could be operable by 2019, Huntley asserted – one year for design work and four years for construction.

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