

# Lake Mead drinking water pumping project meets milestone

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In this Tuesday, Nov. 27, 2018 photo, members of the media and workers tour the Southern Nevada Water Authority's low-lake-level pumping station at Lake Mead National Recreation Area near Las Vegas. Las Vegas Review-Journal via AP Richard Brian

After a three-year battle to keep their underground job site from flooding, a construction crew at Lake Mead is ready to let the water win.

Sometime in the next few days, workers plan to shut off pumps keeping the water out and allow it to fill a cavern they have carefully excavated from the rock more than 500 feet beneath the shore.

The move will mark the latest milestone for the Southern Nevada Water Authority's low-lake-level pumping station, a \$650 million safety net for a region of 2.2 million residents and more than 40 million tourists that draws 90 percent of its drinking water from the Colorado River reservoir behind Hoover Dam.

The pumping station, on track for completion in early 2020, will let Las Vegas keep drawing water even if the drought-stricken lake shrinks another 200 feet to "dead pool," the point at which Hoover Dam can no longer release water downstream.

"This project is drought-driven," Erika Moonin, project manager for the Las Vegas-based authority, told the Las Vegas Review-Journal during a recent final media tour of the underground pump station forebay.

Water dripped from the ceiling and spouted from the walls as a small group of reporters and project officials viewed a subterranean waterfall tumbling down from one of the two vertical shafts providing access to the construction zone.

The mix of lake water and groundwater, some of it thermally heated to a comfortable bath temperature, is flooding in from cracks in the surrounding rock.

The forebay is longer than a football field, about the width of three freeway lanes and four stories high, with 34 openings in the ceiling. Each leads 500 feet to the lake surface.

"I get cell service under shaft 19," Robin Rockey, the authority's liaison to the project, said with a laugh.

Temporary pumps have been removing about 525 gallons of water a minute from the work area. Once those pumps are off, the space should flood within three or four days.

Then a remotely controlled underwater drone will be sent in to unscrew bolts from a massive bulkhead separating the pumping station from the rest of the authority's new plumbing at Lake Mead: a 3-mile, \$817 million "straw" that was finished in 2015 and reaches to the bottom of the reservoir.

"There aren't very many projects like this in the world," said Jordan Hoover, project manager for Montana-based Barnard Construction Co., general contractor for the pump station.

The completed facility will be able to draw up to 900 million gallons of water a day from the deepest part of Lake Mead using 32 specially designed submersible pumps that can produce up to 5,200 horsepower.

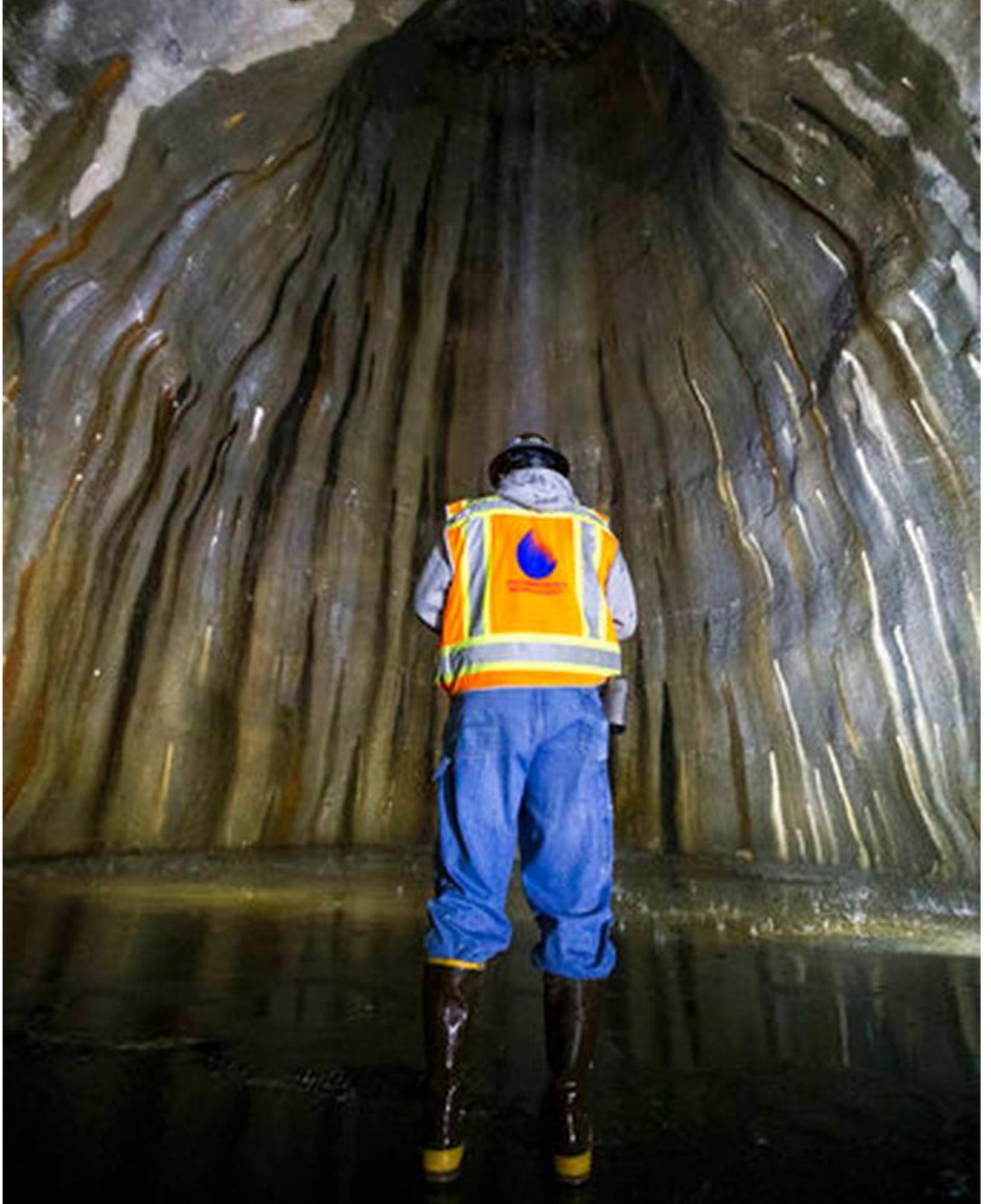
"In combination of depth and flow, they are the largest in the world," Moonin said.

The pumps are manufactured in Spain and shipped to the Port of Long Beach, California, where they are loaded onto trucks for delivery to Southern Nevada. It takes four to five truckloads to deliver a single pump. The entire trip from factory to job site takes about a month, Hoover said.

Sixteen pumps have been delivered so far. Moonin said the first should be installed sometime in February.

The construction crew of about 125 people is also hard at work on an electrical and maintenance building, a dedicated, 65-megawatt electrical substation and a pair of 12-foot-diameter pipes connecting the pumping station to the community's two water treatment plants.







In this Tuesday, Nov. 27, 2018 photo, people are raised from the access shaft

during a tour of the Southern Nevada Water Authority's low-lake-level  
pumping station at Lake Mead National Recreation Area near Las Vegas. **Las  
Vegas Review-Journal via AP** Richard Brian

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