

## Work begins on raising the height of Shasta Dam

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Nathan Morgan has been hanging over the side of side of Shasta Dam recently — sometimes upside down — making marks on the side of the dam.

Morgan is part of a U.S. Bureau of Reclamation crew drilling holes in the side and on the top of the dam to test the strength of the concrete.

The drilling is part of the prep work to raise the height of the dam 18½ feet.

The bureau plans to drill about 70 holes in the dam over the next few weeks, said Don Bader, the bureau's area manager. The crew will also be drilling into the bedrock beneath the dam, he said.

They need to drill the holes to test the concrete to determine whether it is strong enough to bear the weight of the 18½-foot cap on the dam.

"They're finding out the concrete is very hard," Bader said.

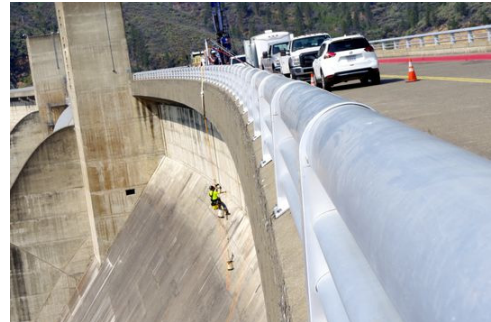
The concrete includes 8-inch to 10-inch chunks of rock mined from the Sacramento River. The rocks were hauled by conveyer belt from Turtle Bay to the dam construction site where they were mixed with the cement.

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Crews are drilling nearly 50 holes on top of the dam and numerous holes on both sides of the dam.

On Thursday, Morgan wore a harness and hung by a rope over the side of the dam as he and the rest of the crew determined where the rebar was in the concrete. After locating the rebar they they marked a drill spot to avoid hitting the metal rebar, said Henry Garcia, construction manager for the bureau.

Earlier this year Congress set aside about \$20 million for pre-construction work and design on the dam raise.



Nathan Morgan hangs over the side of Shasta Dam on Thursday. Morgan and others were drilling holes in the dam to test the strength of the concrete in preparation for raising the height of the dam.  
(Photo: Damon Arthur/Record Searchlight)

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Raising the height of the dam 18½ feet will allow the bureau to store an additional 630,000 acre-feet of water in Shasta Lake. The dam currently holds about 4.5 million acre-feet, so the raise would add 14 percent to the lake's capacity.

An acre-foot is about 326,000 gallons, enough water for a family of four for a year.

In addition to raising the height of the dam, the project also includes raising the height of the approaches to the dam. The roundabout on the east side of the dam will need to be removed and replaced with a new approach, he said.

The three drum gates on the spillway will be replaced with eight vertical gates. The massive temperature curtain on the lake side of the dam will have to be removed and raised, Bader said.

The temperature curtain lets dam operators move deeper, colder water through the dam and into the Sacramento River, where it is needed downstream by winter-run chinook salmon for spawning.

The bureau plans to award a contract to raise the dam in December 2019 and work would begin shortly thereafter, Bader said. The project is expected to be complete by 2024, the bureau said.

*Video link:*

<http://www.redding.com/videos/news/2017/02/22/see-scene-shasta-dam's-spillway-gates-open-first-time-19-years/98287518/>

<https://www.redding.com/story/news/2018/09/27/work-begins-raising-height-shasta-dam/1449293002/>