

U.S. ARMY CORPS OF ENGINEERS



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USACE garners prestigious NAC award for Isabella Dam Safety Modification Project

SACRAMENTO, California – The U.S. Army Corps of Engineers Sacramento District is the recipient of the National Academy of Construction's 2024 Recognition of Special Achievement Award for their work on the Isabella Dam Safety Modification Project at Isabella Lake.

"The NAC is thrilled to select the <u>Isabella Dam Safety Modification Project</u> for our third annual Recognition of Special Achievement Award," announced NAC President and CEO Edd Gibson in a press release issued today. "This award highlights and celebrates innovation, safety, and resourcefulness in planning and solving design challenges among international practitioners in the engineering, design, and construction industries, and the Sacramento District's project delivery team at Isabella Dam rose to top of this year's nominees by excelling in all areas judged."

Prior to the project, USACE dam safety experts considered Isabella Dam to be one of the highest-risk dams in the USACE portfolio for failure or overtopping. The \$650 million modification project addressed several deficiencies by raising the main and auxiliary dams 16 feet and creating a new emergency spillway with an iconic labyrinth weir to greatly lower flood risk for more than 400,000 people downstream of Isabella Lake.

"The impact of this remarkably complex megaproject cannot be overstated," said Chief of Engineers and USACE Commanding General Lt. Gen. Scott Spellmon. "From conception through completion, the project delivery team displayed the USACE ethos, developing creative and innovative solutions to solve significant challenges without sacrificing project schedule, budget, and, most importantly, safety."

The Sacramento District relied upon the USACE South Pacific Division's Dam Safety Production Center for a creative weir design that could safely regulate water flow through the emergency spillway, rather than just hold it back, like a dam. The result was a three-story-tall, zig-zagging labyrinth concrete weir built in a roughly 1,300-foot opening. If straightened out, the weir would have an effective length of about 3,000 feet. The creative configuration significantly increases the amount of water that can be safely discharged from the relatively narrow space.

Yet before weir construction began, contractors had to safely blast out three million cubic yards of rock to create the space for the new emergency spillway as well as source of materials for the dam raises.

The spillway blasting was inherently dangerous and time-consuming, but planners recognized that it offered several benefits that could help solve logistical, cost, and environmental challenges. Their solution was an onsite aggregate plant that crushed the blasted stone into different gradations for use in the main and auxiliary dam raisings, which saved time, money and reduced the project's carbon footprint.

Additionally, upon substantial project completion in 2022, the project team had logged over 2.6 million exposure hours with no significant accidents or injuries—an achievement that speaks to a sustained culture of safety.

The worldwide COVID-19 pandemic and destructive drought-induced wildfires presented additional hurdles to overcome but neither prevented the team from meeting its objectives.

The NAC will present the award to USACE at an October ceremony in San Antonio, Texas.

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