PROJECT OF THE YEAR: INDUSTRIAL COLLABORATIVE

SCALING CALIFORNIA'S CELEGRITS

Skyline Scaffold recently provided complex access systems for the Cedar Creek and Pyramid Dam spillways, facilitating essential maintenance and modernization efforts. **SA** reports.

n 2019, Skyline Scaffold was originally contracted to provide access and working platforms for the Cedar Creek Dam and Pyramid Spillway project in California. The company completed the work at hand and was then contacted again in 2023 for phase two's similar work.

Tasked by the California Department of Water Resources (DWR) to provide innovative access and scaffold solutions on rugged terrain, including suspended scaffolding, stair towers and mobile platforms, all while

working against tight deadlines, Skyline got the job done - and took home the 2024 Scaffold & Access Industry Association (SAIA) Industrial Collaborative Project of the Year Award for its work.

ENGINEERING INGENUITY

Pyramid Dam is located roughly 60 miles northwest of downtown Los Angeles and provides water storage for the greater Los Angeles area. The dam was built between 1969 and 1973 as part of the California Department of Water Resources (DWR) State Water Project (SWP).

The dam is adjacent to the reservoir of Pyramid Lake.

This reservoir plays a vital role in the region's water storage and flood control. Recognizing the paramount importance of maintaining this infrastructure, the DWR initiated a comprehensive assessment and modernization initiative, with a particular focus on the dam's gated and emergency spillways.

Skyline Scaffold's involvement in the project began in 2019, initially focusing on providing safe access for thorough inspections of the spillways.

Fast forward to 2023, and SkyLine Scaffold was back on site to provide all necessary access and working platforms for the spillway repair. This included stair towers inside and





outside the spillways, an 11-meter inclined suspended scaffold with a 600-foot drop at a steep angle, and observation and mobile towers for the spillway.

Additionally, SkyLine provided walkways to access the uneven terrain and bridges over creeks so the project team could get to the locations they needed without additional fears of rattlesnakes and other hazards.

COMPLEX ACCESS SOLUTIONS

The areas surrounding both the Cedar Creek and Pyramid Dam spillways presented logistical hurdles.

"This project was a challenging endeavor due to its location in the rugged backcountry of the southern district of the California Water Project," Skyline said.

Often, Skyline had to build access solutions in order to simply move equipment across a hazard in order to build the actual access. On both occasions Skyline was contracted, the project had tight timelines to complete repairs before the winter rains began. This made efficient and innovative access solutions crucial.

INSET: The Pyramid Dam spillway. BELOW: Walking stairs and the creek bridge at the bottom of the dam's spillway.





The entire project needed - and utilized - rope work professions from Mistras rope specialists, as well as specialty trained Skyline Scaffold personnel to access the entire spillway, move gear by helicopter to the build site and provide a safe means of investigation and repair.

Contract value stood at \$294,000

SKYLINE SAFFOLD HONORED WITH SAIA AWARD

Skyline Scaffold's work on the Cedar Creek and Pyramid Dam spillways was awarded the 2024 Scaffold & Access Industry Association (SAIA) Industrial Collaborative Project of the Year Award. This prestigious accolade honors projects that exemplify outstanding collaboration and innovation within the scaffold and access industry.

The award was presented during the



The Skyline Scaffold team accepting the SAIA's 2024 Industrial Collaborative Project of the Year Award. PHOTO: SAIA

SAIA's Annual Convention & Exposition held on October 3, 2024, in Denver. Skyline Scaffold's collaborative efforts with Performance Swing Stage, DH Charles Engineering, Bee Access and DSS were instrumental in overcoming the complex challenges presented by the dam projects.

"We are incredibly honored to receive this recognition from SAIA," said a Skyline Scaffold representative. "This award underscores the dedication and expertise of our team and partners in delivering safe and efficient access solutions for critical infrastructure projects."

To learn more about the SAIA Project and Member Awards, or to enter an award submission, visit www.saiaonline.org/awards.

sa

and work was completed in two phases: September 2019-March 2020, and September 2023-December 2023.

COLLABORATIVE EFFORTS

The success of the project was bolstered by strategic collaborations with industry experts:

- Performance Swing Stage
- DH Charles Engineering
- Bee Access
- Direct Scaffold Supply



FUTURE-PROOFING CALIFORNIA'S WATER INFRASTRUCTURE

In its most recent inspection, the California Division of Safety of Dams (DSOD) rated Pyramid Dam as satisfactory – meaning there were no existing or potential dam safety deficiencies that will impact the functioning of the dam. However, "there are improvements that could be made to mitigate impacts due to an extreme weather event or earthquake," officials noted.

Based on the most recent DSOD findings as well as other inspection and assessment activities conducted by DWR, the initial focus of the Pyramid Dam modernization was to assess the impacts of an extreme weather event and to conduct earthquake analyses to identify improvements for the gated spillway and the emergency spillway.

The spillway's condition and extreme weather assessments discovered: The gated spillway at Pyramid Dam is used approximately once per year to release natural inflows and whenever inflows exceed stream release capacity.

The emergency spillway at Pyramid dam has never been used.

- Climate models show that increased temperatures in California will result in more precipitation falling as rain instead of snow which will change river flows in the state and could impact how DWR operates the SWP facilities to manage changing precipitation patterns.
- DWR wants to ensure that the gated spillway will continue to work and

that the emergency spillway will work appropriately if some future events require its use.

The gated spillway investigation's findings have led to maintenance actions and improvements in the routine inspection, surveillance, and monitoring of the spillway.

Erodibility analyses for the unlined emergency spillway indicate that while erosion and damage to the spillway may occur, the potential for erosion to headcut back to the spillway weir and reservoir is remote, even under extreme flow conditions.

The Modernization Program is expected to take about 10 years to complete, though it could take longer.

Activities thus far have included assessing the dam and its associated structures and managing construction activities to ensure the dam and structures allow for continued safe operations. Work has entailed:

- Assessing the spillway for reliability and resiliency.
- Making improvements or repairs to spillways, outlet structures, release valves and instrumentation.

■ Conducting seismic analyses to understand how the dam and its features will be impacted by potential earthquakes.

■ Continually assessing the dam to identify potential performance issues and proactively implementing solutions to reduce potential risks.