

Memo

TO: Board of Directors

FROM: Gabe Aronow, PE, Director of Engineering
Peter Wade, PE, Director of Power Systems
Adrian Schneider, PE, Senior Engineer

DATE: August 26, 2026

SUBJECT: French Dam Hydraulic Cylinder Actuator
Replacement/ Refurbishment Summary (Project No. C0020)
(Consent)

ENGINEERING

Recommendation:

Approve a contract for the refurbishment of the French Dam Hydraulic Cylinder Actuator (HCA) by Unico Mechanical Corporation in the amount of \$172,800 plus a contingency of \$10,200, for a total contract amount up to \$183,000, and authorize the General Manager to execute the appropriate documents.

Background and Initial Procurement:

On June 26, 2026, the District received proposals from Unico Mechanical (Unico) and ZEMARC for the Hydraulic Cylinder Actuator (HCA) project. The bids outlined the following options:

- **Refurbishment:** Unico provided a written quote of \$210,000. ZEMARC provided a verbal estimate between \$20,000 and \$50,000, pending an inspection of the HCA's condition.
- **New Replacement Cylinder:** ZEMARC quoted \$166,398 for a smaller-dimension cylinder that met all bid specifications. Unico quoted \$281,000.
- **Lead Times:** ZEMARC estimated 13 weeks to build a new cylinder, while Unico estimated 20 weeks. Both shops verbally noted that refurbishment would require less time than manufacturing a new unit. The planned installation window is October 12–15, 2026.

On July 22, 2026, the Board approved a budget for a ZEMARC contract for \$166,398. A 10% contingency was added for a total authorization of \$183,036. The

budget allowed for either a full cylinder replacement or a lower-cost refurbishment, to be decided after inspection.

Inspection and Shop Transfer:

- **July 28–29, 2026:** The HCA was removed from the dam face and delivered to ZEMARC's Fresno facility.
- **July 31, 2026:** ZEMARC provided a visual assessment and determined at that time that dismantling would likely cause damage, and recommended a total replacement. NID directed ZEMARC to proceed with dismantling to verify if refurbishment was viable.
- **August 3, 2026:** ZEMARC was only able to partially remove the cylinder top. They stated their Fresno facility could not complete the teardown and recommended shipping the unit to a third-party shop in Ventura. The District opted to retrieve the HCA from Fresno and transfer it to Unico Mechanical in Benicia, CA.

Unico Assessment and Final Recommendation:

- **August 5, 2026:** The District delivered the HCA to Unico. Unico successfully disassembled the entire unit for measurement. Jonathan Meier of GFT, the District's consultant, also inspected the components.
- **August 17, 2026:** Unico provided as-built shop drawings and identified two critical defects: an out-of-true cylinder wall and a bent lower stem.

Unico recommended honing the interior cylinder to restore its shape, replacing the piston, and replacing the lower stem/rod. Mr. Meier confirmed these findings and advised that refurbishing the existing HCA is the superior path. He noted that manufacturing a new cylinder would conflict with the project schedule and introduce engineering risks regarding the slide gate top mount alignment.

Budgetary Impact:

Based on these technical and scheduling constraints, the Engineering and Hydro Staff have determined that refurbishment is the best option. Unico has provided a written quote of \$172,800 to complete this work. The contract with ZEMARC was not signed and should be canceled, and a new Purchase Order with Unico should be created to complete the project.

GA/AS

Attachments: None